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One size fits all? Exploring the relationship of person-environment fit and trust to feeling psychologically safe in the workplace.

By

Twiladawn Stonefish

A Dissertation
Submitted to the Faculty of Graduate Studies
through the Department of Psychology
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy
at the University of Windsor

Windsor, Ontario, Canada

2019

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DECLARATION OF ORIGINALITY

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ABSTRACT

Growing attention to the importance of employee psychological health has resulted in increased attention to its determinants and a growing desire to understand the psychosocial mechanisms through which employee psychological safety can be facilitated. Psychological safety is defined as employees' taken-for-granted beliefs regarding the safety of engaging in interpersonal risk-taking, such that employees believe that they are free to express thoughts and concerns without fear of judgment or reprisal.

The review focused on three important organizational constructs which have fueled considerable empirical research, largely to the exclusion of each other: psychological safety, person-environment fit, and trust. The research study adopted a perception-based focus and explored these constructs at the individual level of analysis. Specifically, this research examined the relation between individual perceptions of: perceived demographic similarity, person-environment fit (with the organization, leader, and coworkers) and psychological safety. Furthermore, this study sought to understand how trust impacts these relationships. A theoretically grounded conceptual model was advanced.

Although psychological safety has been examined at multiple levels of analysis, and has been examined most commonly as a team-level construct, numerous researchers have argued that more work must be done to identify antecedents to psychological safety and to understand how employees come to feel psychologically safe at work. That is, without individuals perceiving they are psychologically safe in their work environment, there cannot be an aggregated perception of psychological safety at the team level. So while team level perceptions represent a climate of psychological safety in the workplace,

the perceptions of such necessarily originate at the individual level. Determining the mechanisms through which individual's come to perceive they are psychologically safe has both theoretical and practical merit through the potential to fuel future research with respect to creating environments and organizational cultures that facilitate more macro-level experiences of psychological safety.

Data were collected from 827 participants using the Amazon Mechanical Turk crowd sourcing platform. Three path models were tested to evaluate the proposed associations between the variables for each of the three referents (organization, leader, and coworker). The results of the path analysis indicated that the proposed model showed excellent model fit to the data for each of the three referents and the model strongly suggested pathways from perceived fit (organization, leader and coworker) to perceptions of psychological safety. The data also supported significant indirect effects of perceived fit to perceptions of psychological safety through the corresponding trust referents. It may be inferred from this finding that not only does perceived fit contribute to perceptions of psychological safety, but trust also plays an integral role in the relationship processes necessary for employees to perceive they are safe to express themselves in the organizational context. This finding contributes to an understanding of the mechanisms that may lead to the development of perceptions of psychological safety in the workplace and has the potential to fuel future research focused on the development of organizational processes to facilitate psychological safety across other levels of analysis. Theoretical and practical implications are discussed.

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To my wonderful family whose love, sacrifice, commitment and encouragement gave me
the courage to persevere...

To my friends and colleagues whose broad shoulders, wisdom, experience and support
provided strength to get this done...

To those who didn't get to stay to see the end, but guided in spirit and followed my
journey from above...

Much love and gratitude.

This success is as much yours as it is mine.

Thank you.

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CHAPTER 1: Problem Formation and Introduction

Problem Formation

In the organizational context, researchers and practitioners have noted the important implications of employee psychological health on organizational functioning (e.g., Albrecht, Bakker, Gruman, Macey, & Saks, 2015; Canadian Standards Association, 2013). There has been a growing recognition of the importance of psychosocial determinants of employee psychological health and safety, as well as on the mechanisms through which it can be protected and facilitated among coworkers, leaders, and the organization as a whole. Effective organizations require a committed, engaged, and productive workforce, who feel they are a part of the organizational environment. Employees need to feel comfortable and safe to express themselves as individuals, colleagues, and organizational members in order to effectively contribute to the organizational climate. Engaged, productive employees work more effectively, tend to be more collaborative, are more effective in pursuit of team and organizational goals, and their contributions to team and organizational goals enable organizational growth (Albrecht et al., 2015; Gupta & Sharma, 2016; Kumar & Pansari, 2015).

Research has trended toward examining potential psychosocial conditions necessary to foster and maintain organizational systems which create a sense of belongingness. Establishing such systems will enable employees to feel connected to their work environment itself, and feel psychologically safe and valued within organizational interpersonal relationships in order to positively impact organizational consequences. For example, research examining psychological well-being and psychological safety (taken-for-granted beliefs regarding the safety of engaging in interpersonal risk-taking; Edmondson, 1999a) in the workplace provides a substantial empirical link with important organizational outcomes; such as performance (Baer & Frese,

2003; Holland, Cooper, & Sheehan, 2017), organizational learning (Carmeli, 2007; Carmeli, Brueller, & Dutton, 2009), and employee turnover (Chandrasekaran & Mishra, 2012).

Employees who feel comfortable in their work contexts report positive psychological well-being at work, and feel psychologically safe enough to voice and challenge ideas. When employees feel psychologically safe, this results in better performance at both the organizational and individual levels. Moreover, person-environment literatures have provided support for the role of congruence and ‘fit’ between employees and a number of organizational referents. This literature base highlights how ‘fit’ relates not only to positive organizational outcomes, but to individual-level outcomes as well. The current study examines mechanisms through which employees may feel psychologically safe in the workplace; specifically, to understand whether employees’ fit with the organization, their leaders, and colleagues predicts their perceptions of psychological safety.

Social exchange theory and research has shown that interpersonal relationships inherently comprise elements of risk and vulnerability whereby actors within the relationships must interpret the relative trustworthiness of the other parties and make decisions on whether or not to trust their intentions and actions (Rousseau et al., 1998). Interpersonal relationships are founded on trust and in the organizational context, trust is related to many organizational and individual outcomes (see Fulmer & Gelfand, 2014 for a systematic review). As such, the trust literature was also consulted to determine the role of trust in the relationship between employee fit in the organizational context and perceptions of employee psychological safety in the workplace. These constructs have been examined independently in the literature; however, the relationships between them and how they impact the development of psychological safety have not yet been explored, providing an opportune avenue for research. Moreover, several calls have

been advanced for research exploring the mechanisms which impact the development of psychological safety. In consideration of these points, the current study sought to address these important gaps.

Introduction

Employees are increasingly being urged to contribute to organizational success by demonstrating behaviours which foster creativity and innovation in order to improve processes and inform practice in the workplace (Newman, Donohue, & Eva, 2017). Employees are encouraged to engage in behaviours such as voicing new ideas, collaborating with other organizational members, and experimenting with new ways of organizing, operating, and completing tasks (Edmondson, 1999b; Nembhard & Edmondson, 2011). Although this is perceived to have many organizational benefits, certain employee-level risks accompany this process. For example, voicing new ideas may be perceived as “rocking the boat” in an effort to challenge the established way of doing things (Newman et al., 2017; Van Dyne & LePine, 1998). Collaborating with colleagues within or across departments has the potential for miscommunication, misunderstandings, or conflict when different methods of interpreting, leading, following, and operating to solve tasks, are employed (Colbert, Yee, & George, 2016). Likewise, experimenting with new approaches for executing tasks may prove unsuccessful, risking the perception of failure or incompetence, and lead employees involved to fear negative perceptions of their ability or character (Van Dyne & LePine, 1998). Fear and vulnerability associated with risk, as well as prospective negative outcomes associated with perceived risks, can be damaging for employees’ psychological well-being.

Moreover, these demands occur in contexts that are increasingly diverse as workplace demographics continue to evolve. In Canada, workplace demographics have undergone rapid change across the last half century (Usalca & Kinack, 2017). Immigration and globalization have impacted the cultural makeup of organizations and women have continued to enter and stay in the workforce (for an historical review of demographic statistics see Statistics Canada, 2018a). Changing economic trends have resulted in employees remaining in the workforce longer (for a review of Canadian employment and national demographics see Statistics Canada, 2018b). Similar trends are occurring in the United States as well (Buckley & Backman, 2017).

When speaking of diversity in the workplace, one can refer to any number of visible and/or invisible differences. ‘Diversity’ may refer to employees of different sexes, sexual orientation or gender identity (e.g., Jansen, Otten, & van der Zee, 2017; Johnson, Trent, & Barron, 2017; Martinez, Sawyer, & Wilson, 2017); geographic location (Earley & Gibson, 2002), education or status (DiTomase, Post, & Parks-Yancy, 2007; Konrad, Seidel, Lo, Bhardwaj, & Qureshi, 2017; Ridgeway, 1991), religion (Gebert, Boerner, Kearney, King Jr., Zhang, & Song, 2014), age (Bunderson & Sutcliffe, 2002; Kilduff, Angelmar & Mehra, 2000), or ethnicity (Hiemstra, Derous, & Born, 2017; Lindsey, Avery, Dawson, & King, 2017; Whitfield-Harris, Lockhart, Zoucha, & Alexander, 2017). Research on diversity in the workplace and in work groups has produced mixed results. Some studies show that diversity and inclusivity have numerous positive advantages such as creativity, innovation, tolerance and sensitivity to differences (*c.f.*, Ali & Konrad, 2017; Gebert, Buengeler, & Heinitz, 2017; Herring, 2017; Hoisl, Gruber, & Conti, 2017; Stojmenovska, Bol, & Leopold, 2017). Alternatively, other research suggests that too much diversity, or poorly managed diversity, results in negative outcomes including prejudice/stereotyping/discrimination (Jones, Sabat, King, Ahmad, McCausland, &

Chen, 2017; Triana, Jayasinghe, & Pieper, 2015), conflict, decreased collaboration, and communication barriers (Paustian-Underdahl, King, Rogelberg, Kulich, & Gentry, 2017), and absenteeism (Avery, McKay, Wilson, & Tonidandel, 2007).

Research also suggests that organizations which fail to implement appropriate organizational processes and structures to embrace and engage diversity within an organization risk fostering cultures which pose heightened risk to employee psychological well-being (Pavalko, Mossakowski, & Hamilton, 2003; Schmitt, Branscombe, Postmes, & Garcia, 2014; Wood, Braeken, & Niven, 2013). In these environments failure to implement processes which leverage diversity may in fact promote discrimination, and restrict team cooperative behaviours and knowledge sharing which can impact employee psychological health, performance and organizational satisfaction. To the extent that organizations prioritize the psychological health of their employees, the greater the opportunity will be that employees can be engaged with their work, be committed to their organization, and be productive and efficient employees (Singh, Winkel, & Selvarajan, 2013).

While diversity management has been an important topic in psychological and sociological research for decades (Bezrukova, Spell, Perry, & Jehn, 2016; Mor Barak, Lizano, Kim, Duan, Rhee, Hsiao, & Brimhall, 2016) researchers have searched to explain the mechanisms behind the inconsistent results discussed above. An alternate approach to understanding how employees are able to successfully integrate into their work environments and work effectively with leaders and colleagues has been to explore the match between employees and these organizational contexts (Greguras & Diefendorff, 2009).

Research has shown that congruence between an employee's values with those of the organization or with those of interpersonal referents, can predict the degree to which an

employee feels integrated in, and a part of, organizational groups, as well as predicting other important individual-level and organizational-level outcomes including positive interpersonal relationships, satisfaction, trust, and well-being (Aycan, Kanungo, & Sinha, 1999; Chatman, 1989, Kristof-Brown et al., 2005; Schneider, 1987). Moreover, research has also found that the relationship between the sociocultural environment, organizational culture, and employee perceptions of organizational practices (e.g., reward, recognition, justice) impacts the degree to which employees feel accepted, integrated in, and comfortable with their organizational environments (Aycan et al., 1999).

Taken together, the literature suggests that employees who feel a part of their organizational environments and feel included and valued in interpersonal organizational interactions experience more positive psychological outcomes, including the perception they are free to express themselves without fear of rejection or reprisal (perceptions of psychological safety), and experience greater trust in organizational relationships. Psychological safety and trust share similar elements of risk and vulnerability; however the distinction lies in the direction of vulnerability and the focal entity upon which perceptions of trust or psychological safety are made. These constructs and the distinction between these perceptions are explored in greater detail in subsequent sections.

Building on the research discussed above, the subsequent literature review was driven by the following research questions:

1. What are the mechanisms through which employees can feel psychologically safe in the workplace?
2. How do the organizational and interpersonal relationships in the workplace impact employees' sense of psychological safety?

3. What is the role of trust in fostering these relationships?

To answer these questions, the review was guided by theories of social identity (Tajfel, 1978; Tajfel & Turner, 1979), social categorization (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), and cultural fit (Aycan, Kanungo, & Sinha, 1999; Chatman, 1989, 1991, 1998, Schneider, 1987) and focused on three important organizational constructs which have fueled considerable empirical research, largely to the exclusion of each other: psychological safety, person-environment fit, and trust.

To begin, the literature review below offers a brief description of research findings and trends with respect to psychological health in the workplace and the important organizational and individual outcomes associated with employee well-being in order to provide context for how psychological health has been investigated. The review moves to an examination of a more recent development in the psychological health literature: *psychological safety*. This construct is defined and subsequently explored, with attention to the relationship between psychological safety and important organizational and individual outcomes. Attention is also given to research which identifies mechanisms through which psychological safety is created in the organizational context. From here, literature pertaining to how individuals understand, interpret and define their social contexts is examined. Cultural sense-making, cultural salience, and how these processes impact upon, and are impacted by, organizational cultures provides a basis for understanding the role of organizational values and norms in making employees feel connected to their work environments. Research on person-environment fit and organizational demography (shared demographic characteristics) are explored to understand the mechanisms through which employees perceive organizational values and norms are compatible with their own, thus creating an environment that is comfortable and psychologically safe. Finally, the vast literature

on trust is discussed with attention to trust in interpersonal contexts and how trust in organizational referents impacts employee perceptions of psychological safety. The literature review culminates in the identification of notable gaps. A conceptual model is presented along with research hypotheses.

CHAPTER 2: Literature Review**Psychological Health in the Workplace**

Employee psychological health is considered an important part of organizational success (Deloitte Centre for Health Solutions, 2017; Goetzel, Ozminkowski, Sederer, & Mark, 2002; Towers Watson, 2012). A satisfied, engaged, committed, and psychologically sound workforce can have many positive results for an organization including positive organizational citizenship behaviours and increased employee productivity (*cf.*, Dollard & McTernan, 2011; Garrick, Mak, Cathcart, Winwood, Bakker, & Lushington, 2014; Hall, Dollard, Winefield, Dormann, & Bakker, 2013; Kitts, 2013; Tarafdar, Tu, Ragu-Nathan and Ragu-Nathan, 2007). On the contrary, unhappy employees may exhibit more counterproductive work behaviours (Fox, Spector, Miles, 2001; Spector, Fox, Penney, Bruursema, Goh, & Kessler, 2006) or become disengaged (Garrick et al., 2014), resulting in quitting intentions and higher rates of attrition (Brunetto, Teo, Shacklock, & Farr-Wharton, 2012; Mood Disorders Society of Canada, 2014), as well as absenteeism/presenteeism (Cooper & Dewe, 2008; Dollard, Tuckey, & Dormann, 2012; Mood Disorders Society of Canada, 2014; Rugulies, Christense, Borritz, Villadsen, Bültmann, & Kristensen, 2007). Moreover, unhappy employees may suffer from greater psychological distress in the workplace. Workplace-related psychological distress has been linked to a number of organizational and individual level outcomes including anxiety, depression and burnout (Akerboom & Maies, 2006; Bakker, Demerouti, & Euwema, 2005; Dalgard, Sørensen, Sandanger, Nygård, Svensson, & Reas, 2009), somatic symptoms (Faragher, 2005), and reduced self-efficacy and feelings of competence (Bakker et al., 2005).

Many Canadians spend more waking hours at work than at any other place (Bartram, Chodos, Gosling, Hardie, Knoop, Lapierre, & Proulx, 2012) and research has found that individuals with jobs are healthier, happier, and experience greater psychological well-being, than those who are unemployed (Cole, Daly, & Mak, 2009). Attention to the psychological health of employees becomes an important consideration for organizations not merely for facilitating positive outcomes with respect to employee productivity and health, but also for improving organizational effectiveness. However, due to the significant changes in employment and social conditions over the past decades, many individuals may be faced with obstacles to maintaining their psychological well-being at work.

Organizational structures such as leadership, climate, and culture are important mechanisms which can impact employee psychological health (e.g, Behson, 2005; Boudrias, Desrumaux, Gaudreau, Nelson, Brunet, & Savoie, 2011; Bowling & Beehr, 2006; Denison, 1996; Dikkers, Geurts, den Dulk, Peper, & Kompier, 2004; Erkutlu & Chafra, 2016; Hall, Dollard, Winefield, Dorman, & Bakker, 2013; Kelloway, Weigand, McKee, & Das, 2013; Parker et al., 2003; Singh, Winkel, & Selvarajan, 2013; Skakon, Nielsen, Borg, & Guzman, 2010; Timms et al., 2014) and, as such, are influential in creating a workplace context where employees feel safe to collaborate, explore new challenges, experiment with new ways of organizing work, and take reasonable risks.

In spite of the opportunity for organizational leaders to positively impact psychological well-being in the workplace, Schulte and colleagues (2015) lament that, in practice, psychological health has remained largely tangential to policies and practices related to worker health and safety. According to these authors, the term "...and well-being" is generally a conjunctive addition to policy and is rarely defined or operationalized (Schulte et al., 2015).

Where physical safety has long been recognized as an integral part of responsible organizational operation (e.g., Quinlan, 1999; Royal Commission on the Health, & Safety of Miners, 1976; Walters, 1983) and enshrined in legislation (e.g., Occupational Health and Safety Act, 1990), psychological safety has traditionally received little attention; however, legal changes supporting the protection of psychological safety in the workplace have resulted in an shift toward understanding how psychological health and safety can be managed in the workplace (see Canadian Standards Association, 2013 ; Shain, 2010 for reviews of jurisprudence in Canada ; and Coleman, 2004 ; Yamada, 2010 ; 2012 for reviews of legal trends in the United States ; see also, Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11; Mental Health Reform Act, 2016, S.2680 for legal reforms for the protection of mental health and freedom from harassment).

However, recent developments in the field of psychological health have drawn attention to employee psychological well-being as an important workplace issue in its own right. For example, in 2013 the Mental Health Commission of Canada commissioned a report that established a national standard for Canadian organizations with respect to psychological health and safety in the workplace (*Psychological health and safety in the workplace – Prevention, promotion, and guidance to staged implementation*; Canadian Standards Association, 2013). The voluntary standard provides Canadian organizations with guidelines for creating, sustaining, and evaluating their organization's and employees' psychological health and "specifies requirements for a documented and systematic approach to develop and sustain a psychologically healthy and safe workplace" (Canadian Standards Association, 2013, p. ix).

Although not a theoretical model, the Canadian National Standard was developed after considerable review of the scientific literature and arrived at by consensus of a technical panel

comprised of multidisciplinary stakeholders and subject matter experts (Canadian Standards Association, 2013). The Canadian National Standard does not delineate the mechanisms through which psychological well-being affects people and organizations, however, it does provide an outline of 13 specific facets of organizations which have been identified as measurable factors known to impact employee psychological well-being, independently and in combination (Canadian Standards Association, 2013).

Table 1

Factors that affect psychological health and safety in the workplace (adapted from the Canadian Standards Association, 2013).

Workplace Factors	Definition
Organizational culture	A work environment characterized by trust, honesty, and fairness.
Psychological and social support	A work environment where co-workers and supervisors are supportive of employees' psychological and mental health concerns, and respond appropriately as needed.
Clear leadership and expectations	A work environment where there is effective leadership and support that helps employees know what they need to do, how their work contributes to the organization, and whether there are changes coming.
Civility and respect	A work environment where employees are respectful and considerate in how they interact with one another, as well as with customers, clients, and the public.
Psychological demands	A work environment where employees' interpersonal and emotional competencies fit with the requirements of their position.
Growth and Development	A work environment where employees receive encouragement and support in developing their interpersonal, emotional, and job skills.
Recognition and Reward	A work environment where there is appropriate acknowledgement and appreciation of employees' efforts in a fair and timely manner.
Involvement and Influence	A work environment where employees are included in discussions about how their work is done and how important decisions are made.
Workload management	A work environment where tasks and responsibilities can be accomplished successfully in the time available.
Engagement	A work environment where employees feel connected to their work and are motivated to do their job well.
Work/Life Balance	A work environment where there is recognition of the need for balance between the demands of work, family, and personal life.
Psychological Protection	A work environment where employees' psychological safety is ensured.
Protection of Physical Safety	A work environment where employees' physical safety is ensured.

In addition to the Canadian National Standard, other jurisdictions are also considering the psychological safety of employees. For example, the UK Health and Safety Executive (HSE) has

set forth management standards to help UK organizations identify risk factors, to help employers identify underlying causes and how to prevent them (HSE, n.d.). The HSE Management Standards were originally developed in order to assist organizations in meeting their legal duty in relation to psychosocial risk assessment; however Edwards, Webster, Van Laar, and Easton (2008) suggest that the HSE Management Standards have been increasingly used by organizations to monitor working conditions. The HSE Management Standards cover seven key areas of work design that have been found to be associated with poor physical and psychological health and lower job productivity, including: job demands, job control, managerial support, peer support, employment relationships, role clarity, and organizational change (Houdmont, Randall, Kerr, & Addley, 2013).

Table 2

Elements of work design that affect psychological health and safety in the workplace (adapted from Houdmont et al., 2013).

Element	Definition
Job demands	Include elements such as workload, work patterns, and the work environment.
Control	How much say the person has in the way they do their work.
Managerial support	Includes the encouragement, sponsorship, and resources that employees receive from the organization and management.
Peer support	Includes the encouragement, sponsorship, and resources that employees receive from colleagues.
Relationships	Includes promoting positive working relationships to avoid conflict and unacceptable behaviour.
Role clarity	Refers to whether people understand their role within the organizations and whether the organization ensures they do not have conflicting goals.
Change	Refers to how organizations manage and communication change (large and small) within the organization.

Moreover, many countries are developing national systems to monitor and evaluate psychosocial risk factors in the workplace as a means to inform policy and programs designed to mitigate work-related stress and promote psychological health and well-being at work (Dollard, Skinner, Tuckey, & Bailey, 2007).

The increased emphasis on the need to protect employees' psychological well-being and create workplaces that are psychologically safe has resulted from increased recognition of the negative outcomes that are associated with psychosocial risk including increased rates of depression, anxiety, burnout, and somatic symptoms (e.g., Akerboom & Maies, 2006; Bakker, Demerouti, & Euwema, 2005; Dalgard et al., 2009; Day & Livingstone, 2001; Hall et al., 2013; Idris, Dollard, & Yulita, 2014; Leka & Jain, 2010), declines in productivity and performance (Kitts, 2013; LaMontagne, Keegal, Vallance, Ostry, & Wolfe, 2008), and rising costs associated with absenteeism, presenteeism, and workers' compensation claims (Cooper & Dewe, 2008; Deloitte Centre for Health Solutions, 2017; Mood Disorders Society of Canada, 2014; Towers Watson, 2012). Additionally, a World Health Organization report cautions that the influence of psychosocial workplace risks is a global concern (Leka & Jain, 2010). Determining the conditions under which employees *feel* psychologically safe is a necessary and critical first step in creating a context that *is* psychologically safe.

Psychological Safety

The roots of psychological safety can be found in the context of early theorizing and research on what conditions were necessary and important to produce organizational change. Early research by Schein and Bennis (1965) suggested that psychological safety was essential for making people feel secure and confident in their ability to change in response to shifting organizational challenges. Later Schein (1993) argued that psychological safety was an essential condition to help employees overcome defensiveness, or learning anxiety, that occurs when they were presented with information or circumstances contrary to their expectations or hopes. When individuals experience psychological safety, they are “free to focus on collective goals and

problem prevention rather than on self-protection” (Edmondson & Lei, 2014, p. 25). According to Schein and Bennis (1965), psychological safety was fundamentally about reducing interpersonal risk, which necessarily accompanied uncertainty and change. As the subsequent literature review will reveal, organizational theory and research has broadened this understanding and suggests that perceived psychological safety refers to conditions or contexts where individuals perceived that interpersonal risk taking is acceptable and safe, and the consequences of risk taking do not outweigh the potential benefits. Presumably, when individuals feel psychologically safe in their work environments they experience greater confidence to take interpersonal risks as a result of their self-assurance in managing change in the face of organizational uncertainty. Furthermore, this confidence to take interpersonal risks may come about as a result of experienced, or felt trust, with organizational referents.

In 1990, Kahn revitalised research on psychological safety and proposed that psychological safety affects individuals’ willingness to “employ or express themselves physically, cognitively, and emotionally during role performances,” rather than disengage or “withdraw and defend their personal selves” (p. 694). Furthermore, Kahn (1990) argued that when relationships within a group are characterized by trust and respect, people are more likely to believe they will be given the benefit of the doubt and feel safer taking risks and embracing new challenges (Edmondson & Lei, 2014) – a defining characteristic of psychological safety.

According to Edmondson and colleagues (Edmondson & Lei, 2014; Edmondson & Roloff, 2009) perception of being psychologically safe rests on the anticipated consequences of taking interpersonal risks in the workplace and the belief that individuals are free to express themselves without fear of rejection, reprisal, or humiliation. In environments that promote psychological safety, employees have confidence that well-intentioned mistakes will not be

viewed negatively, and that asking for assistance and feedback seeking is acceptable and even encouraged (Edmondson & Lei, 2014). Therefore, in these environments, employees are empowered to take interpersonal risks that ultimately foster confidence and learning, and allow employees to collectively work toward organizational goals and problem prevention rather than on self-protection (Edmondson & Lei, 2014).

Several definitions of psychological safety have been proposed, including a recent trend to focus narrowly on feeling safe to voice opinions related to the work context. However, Newman and colleagues' (2017) review of the field suggests that the majority of research on psychological safety has followed Edmondson's (1999a) lead and defines psychological safety as employees' taken-for-granted beliefs regarding the safety of engaging in interpersonal risk-taking in the work context, such that employees believe that they are free to express their thoughts and concerns without fear of judgment or reprisal. The current project adopts the definition of psychological safety advanced by Newman and colleagues. Understanding the mechanisms through which employees come to perceive they are psychologically safe at work, has important implications for organizational research.

Psychological safety shares common elements with well established conceptualizations of trust. Although trust will be discussed in greater detail in subsequent sections, this point warrants addressing here. In spite of a plethora of definitions of trust across multiple fields of inquiry, trust at its core is characterized by risk, vulnerability, and a state of uncertainty. Indeed, both psychological safety and trust capture elements of vulnerability and interpersonal risk (Edmondson, 2004; Newman et al., 2017); however, the distinction between the two constructs lies in the direction of vulnerability and the focal entity upon which assessments are made with respect to trusting or perceiving psychological safety. To trust, vulnerability lies in the fact that

the trustor (the person giving trust) gives the trustee (the entity receiving the trust) the benefit of the doubt that the trustee is worthy of trust, based on assessments of action or character.

Psychological safety, on the other hand, is distinguished by the extent to which individuals perceive that the entity will give them the benefit of the doubt making interpersonal risk taking more or less safe (Frazier, Fainshmidt, Klinger, Pezeshkan, & Vacheva, 2017). Other researchers suggest that the distinction can further be made that psychological safety focuses on individual perceptions of organizational and/or group norms and how others in that context will view interpersonal risk-taking, whereas trust focuses on how the trustor views the trustee (Newman et al., 2017). There is empirical support for trust in various referents as a determinant of psychological safety or as mediating or moderating various relationships with psychological safety (see Frazier et al., 2017); however no empirical support was found to suggest that psychological safety predicts trust.

Psychological safety research.

Psychological safety has been explored at multiple levels of analysis (see Frazier et al., 2017 for the most recent review), has been described as an individual-level construct (Kahn, 1990; Schein & Bennis, 1965) or a team-level construct (Edmondson, 1999a; Edmondson & Roloff, 2009), and has been examined with respect to important organizational-level outcomes (Baer & Frese, 2003; Carmeli, Brueller, & Dutton, 2009). Most recently, psychological safety has been developed and advanced as a type of organizational climate (climate of psychological safety; Bradely, Postlethwaite, Klotz, Hamdani, & Brown, 2012; Shao, Fenyl & Wang, 2017; Tu, Lu, Choi, & Guo, 2018; Walker, Ruggs, Taylor, & Frazier, 2019; Zhou & Pan, 2015). To capture the breadth of conceptualizations of psychological safety, the following paragraphs discuss the ways in which psychological safety has been explored in research and highlight the fact that

extant research relies on individual-level perceptions of the construct even when focusing on team or organizational levels of analysis.

As discussed above, psychological safety is primarily defined in terms of employee perceptions regarding the consequences of engaging in interpersonal risk in the workplace. Therefore, both conceptual and levels of analysis issues are problematic in this area of research. Employee perceptions are necessarily assessed at the individual-level of analysis. Team-level analysis of perceptions of psychological safety equally relies on this individual-level conceptualization, with team-level measurement derived from aggregated individual-level perceptions. Thus, the current perspectives on psychological safety have an individual level definition of the construct, even while research is conducted at various levels of analysis. The present study adopts this individual level definition and seeks to examine the mechanisms through which psychological safety develops in individuals: that is, perceived psychological safety at the individual-level is the outcome of interest.

In the context of the present research, psychological safety is conceptualized as a cognitive state and an individual level perception. Individuals interpret the broader social and work environment to assess how others in the workplace will respond to interpersonal risk-taking and formulate individual perceptions of psychological safety based on these judgments. This focus on individual-level perceptions will be carried consistently throughout the research project. Doing so is not intended to downplay the merits of operationalizing psychological safety as a group or organizational level phenomenon. Rather, the present research seeks to understand the mechanisms through which individual employees come to perceive they are psychologically safe in their workplace environments in an attempt to provide insight regarding the possible ways that

psychological safety may be facilitated for individuals who may not perceive this in their workplace contexts.

Because perception begins with the individual there are important theoretical and practical implications associated with identifying determinants of psychological safety. From a theoretical perspective, considerable research links psychological safety to important organizational outcomes, as is discussed in greater detail below. However, significantly less research has been advanced to expand the field's understanding of the determinants psychological safety, thus contributing to a more refined understanding of the ways that psychological safety may be enhanced or inhibited at the individual level. From a practical perspective, identifying facilitators of psychological safety enables a more tailored approach to the development and implementation of organizational programs, policies and/or interventions designed to increase employee psychological safety and thus organizational performance.

Aggregating individual perception scores to derive a team-level psychological safety score may undermine the potential benefits of workplace interventions by missing valuable insight provided by participant scores that are outside of "average" (Hofstede, Bond, & Luk, 1993). For instance, aggregating the scores of all participants in a given business unit or team may suggest that there is a team climate of psychological safety; however, this aggregate result whitewashes the scores of those individuals who may have scored as individuals very low (or conversely very high) on psychological safety. An average total score suggesting that overall team members feel psychologically safe reduces the impetus of the organization to provided targeted supports to individuals who may be experiencing negative consequences as a result of not feeling safe to express themselves at work. Assessing psychological safety at the team level may also overlook the negative impacts which may be associated with conflict management or

team identification when members high on psychological safety feel very comfortable challenging ideas and voicing concerns in groups where others do not perceive the same level of safety or comfort (see Johnson & Avolio, 2018; Lee, Choi, Kim, 2018).

Psychological safety at the individual level of analysis. At the individual level, psychological safety has been defined primarily as feelings and experiences of being safe to be oneself in one's workplace without fear of judgement or ridicule and to feel respected and accepted as individuals (see Newman et al., 2017). Psychological safety at the individual level has been found to be related to such constructs as voice (Detert & Burris, 2007; Detert & Edmondson, 2011; Liang, Farh, & Farh, 2012; Walumbwa & Schaubroeck), engagement (Frazier et al., 2017; Kark & Carmeli, 2009), task performance and organizational citizenship behaviours (Frazier et al., 2017), and knowledge sharing (Siemens, Roth, Balasubramanian, & Anand, 2009).

Previous research at various levels of analysis. Edmondson's (2003), work has focused predominantly on team psychological safety as a group-level construct which characterizes shared perceptions of the team. Edmondson's work with teams (1996, 1999a, 1999b) found significant differences in the interpersonal climate of psychological safety between groups within the same organizations – even within strong shared organizational cultures, groups varied significantly in beliefs related to interpersonal risk (Edmondson, 2002, 2003; Edmondson & Mogelof, 2005). This led her to surmise that psychological safety may be more appropriately considered as a team-level construct describing shared perceptions of interpersonal safety. At the team or group level, research reveals that psychological safety is related to numerous important group-level outcomes such as: information sharing and communication (Kessel, Kratzer, & Schultz, 2012), team conflict (Mu & Gnyawali, 2003), learning and decision quality (Bunderson

& Boumgarden, 2010; Carmeli, 2007; Carmeli & Gittal, 2009; Choo, Lindeman, & Schroeder, 2007; Edmondson, 1999b; Tucker, 2007; Tucker, Nembhard, & Edmondson et al., 2007), leadership style/influence (Hirak, Peng, Carmeli, & Schaubroeck, 2012; Roussin, 2008; Schaubroeck, Lam, & Peng, 2011), performance (Carmeli et al., 2012; Chandrasekaran & Mishra, 2012, Collins & Smith, 2006; Edmondson, 1999b; Faraj & Yan, 2009; Mu & Gnyawali, 2003; Schaubroeck et al., 2011; Tucker et al., 2007), and innovation and creativity (Kark & Carmeli, 2009; Kessel et al., 2012).

Despite the wealth of research exploring the many positive associations with important group-level outcomes, the argument must be made for greater exploration of psychological safety at the individual level. From the perspective of both theoretical and practical implications, considering psychological safety as a group phenomenon prior to having a concrete understanding of how it is developed and fostered at the individual level may result in important individual-level differences being missed that have the potential to strengthen or weaken group-level associations in the work context.

Psychological safety as a mediator at individual and team levels of analysis. Much research has also explored the mediating effects of psychological safety. For example, research by Carmeli and colleagues found that psychological safety (conceptualized as an individual level construct) mediated relationships between high quality work relationships and learning behaviours, social capital and failure-based learning, failure-based learning and high quality relationships, and failure-based learning and unit performance (Carmeli, 2007, Carmeli et al., 2009; Carmeli & Gittell, 2009). Other research has indicated that psychological safety (as an individual level construct) mediates the relationship between change-oriented leadership styles

and voice (Liang et al., 2012) and ethical leadership and voice (Walumbwa & Schaubroeck, 2009).

Conceptualized as a team-level construct, psychological safety was found to mediate relationships between relational leadership and team decision quality, and leader inclusiveness and team performance (Carmeli, Tishler, & Edmondson, 2012; Hirak et al., 2012). Likewise, Edmondson and colleagues (Edmondson, 1999a, 1999b; Nembhard & Edmondson, 2006) showed that the relationship between supportive team structures and team performance was mediated by psychological safety at the team level of analysis. Similar results were found in Bunderson and Boumgarden's (2010) and Chandrasekaran and Mishra's (2012) research, whose data revealed mediating effects of psychological safety on team structure and team learning, and team autonomy and performance, respectively.

Psychological safety as a moderator at the team level of analysis. Psychological safety has also been explored as a moderating factor in numerous relationships. Several researchers have examined the moderating effects of team psychological safety on the relationship between team diversity and team innovation and performance (Bradley et al., 2012; Caruso & Woolley, 2008; Gibson & Gibbs, 2006; Kirkman, Cordery, Mathieu, Rosen, & Kukenberger, 2013; Leroy, Dierynck, Anseel, Simons, Halbesleben, et al., 2012). These researchers have shown that psychological safety enables teams to engage in more open, respectful interactions, thus enabling teams to leverage the benefits of team diversity. Interestingly, Kirkman and colleagues (2013) found a curvilinear relationship between diversity and performance in organizational communities of practice which suggested that the positive relationship between the two variables was strengthened with higher levels of diversity, but the moderating effect of psychological safety weakened the negative relationship between the two variables at lower levels of diversity

(i.e., the negative effect of lower diversity on performance was moderated when participants perceived they were psychologically safe).

Psychological safety at the organizational level of analysis. Finally, recent work has also been developing and exploring the concept of climates of psychological safety within organizations. A psychologically safe workplace is one where:

employees feel that their colleagues will not reject people for being themselves or saying what they think, respect each other's competence, are interested in each other as people, have positive intentions to one another, are able to engage in constructive conflict or confrontation, and feel that it is safe to experiment and take risks" (Newman et al., 2017, p. 522).

Thus a climate of psychological safety is one where the members of the organization perceive that organizational structures promote, uphold, and value employees' psychological well-being and safety. According to Dollard and Bakker (2010), a psychosocial safety climate is "*causally prior to* psychosocial working conditions...affecting not just interpersonal factors but a range of psychosocial risk factors" (p. 580, emphasis in original) and is an important antecedent to psychological safety. Psychosocial safety climate refers to the shared perceptions of the policies, practices, and the procedures implemented by organizations for the protection of members' psychological health and safety (Dollard et al., 2012)

Psychological safety climate as a group-level construct has been found to be related to more effective coping mechanisms in employees experiencing bullying in the workplace, which mitigated psychological distress of victims (Kwan, Tuckey, & Dollard, 2016). Other scholars have noted the role of psychological safety climate on mitigating work-related depression and burnout (Hall, et al., 2013; Idris et al., 2014), as a lead indicator of psychosocial risks and

psychological health (Idris, Dollard, Coward, & Dormann, 2012), and as moderating the relationship between job demands and engagement (Garrick, et al., 2014), all individual level outcomes. Psychological safety, conceptualized at both the individual and team levels, has been found to be related to important organizational outcomes such as organizational performance (Baer & Frese, 2003), organizational learning (Carmeli, 2007; Carmeli et al., 2009), and employee turnover (Chandrasekaran & Mishra, 2012).

Psychological Safety: Antecedents. While there has been a growing body of research examining mediating and moderating effects, less research has focused on antecedents of psychological safety; however, some notable examples exist. Using longitudinal data collected from 26 innovation teams in seven companies, Edmondson and Mogelof (2005) investigated antecedents of team psychological safety by examining the relationship of organizational resources, team member and leader interactions, and team goal clarity to team psychological safety, as well as the influence of individual personality differences on individual team members' perceptions of team psychological safety. Their exploration at multiple levels of analysis was conducted in an effort to account for the fact that an individual's experience of psychological safety is simultaneously affected by the constellation of features of the organizational context. Despite this intention, some measurement issues exist with respect to the fact that the psychological safety measure was derived from an existing survey intended to measure organizational climate for creativity. Although the scale items were reflective of individuals' perceptions of group level norms that were somewhat consistent with the most common measurement and definition of psychological safety advanced in other works, the scale items may have confounded perceptions of trust and psychological safety by asking direct questions about supervisory traits (openness to new ideas) and a group climate of trust.

Other research has examined possible precursors to psychological safety in the workplace such as leadership (e.g., Aranzamendez, James, & Toms, 2015; Carmeli et al., 2012; Coombe, 2010; Detert & Burris, 2007; Hirak et al., 2012; Madjar & Ortiz-Walters, 2009; Schaubroeck et al., 2001; Schaubroeck, Lam, & Peng, 2011; Walumbwa & Schaubroeck, 2009), trust and high quality relationships (e.g., Edmondson & Kramer, 2004; Carmeli, Brueller, & Dutton, 2009), trust in one's leader (e.g., Madjar & Ortiz-Walters, 2009), management style (e.g., Halbesleben & Rathert, 2008), and organizational structure and culture (e.g., Schein, 2010; Edmondson & Mogeloff, 2006). Kahn (1990) very broadly identified four antecedents to psychological safety: interpersonal relationships, group dynamics, leadership, and organizational norms; however, little empirical research is available that explores the concept of psychological safety as an outcome in its own right and conspicuously absent is literature with respect to examining psychological safety as an outcome at the individual level. In this regard, psychological safety as an outcome has been treated more theoretically and definitionally, rather than empirically. Recently, several authors have recommended that scholarship would benefit from greater research aimed at fostering greater understanding of the conditions necessary for the development of psychological safety (e.g., Edmondson & Lei, 2014; Newman et al., 2017).

Psychological safety research summary. There is considerable inconsistency with respect to the appropriate level of analysis of this construct. While the literature appears divided in terms of examining psychological safety as either an individual-level or team-level construct, the overwhelming majority of the research acknowledges Schein and Bennis' (1965) and/or Kahn's (1990) early theorizing on psychological safety as an individual-level variable. Moreover, the majority of the literature relies on Edmondson's (1999b) definition which positions psychological safety as an individual perception, defining it as the belief that one is free

to express oneself freely without fear of judgment or reprisal, regardless of the level of analysis at which it is being studied. Aranzamendez and colleagues' (2015) conceptual work examines the need for hospital administrations to foster the development of staff members' psychological safety, relying heavily on research showing evidence of the positive effects of leadership in dyadic relationships. However, these authors alternate between consideration of staff members' perceptions of psychological safety and references to team psychological safety while relying on the definition of this construct as an individual perception. Others have conceptualized psychological safety at the individual level as well as aggregating individual scores to derive a unit level measurement relying on definitions of psychological safety as individual member's perceptions and at the unit level as an environment that is perceived as interpersonally non-threatening (Hirak et al., 2012). Furthermore, most research uses Edmondson's (1999b) measure which is worded in first- and second-person and captures individual-level perceptions, but is often adapted by changing the referent in order to reflect operationalization of the construct as team climate derived from the aggregate of individual-level perceptions, or as measurement of individual-level perceptions of the team or organization as a whole.

Justification for Examination at the Individual Level.

Despite inconsistencies, Edmondson and Lei's (2014) review of the state of the field led them to remark that "the similarities in essential findings across levels of analysis are striking" (p. 37). In fact, these authors argue that the interpersonal experience of psychological safety is "foundational for enabling behaviors essential to learning and change, whether the entity that needs to change is a person, a team, or a company" (p. 37). To provide support for previous assumptions of the multilevel composition of psychological safety, Frazier and colleagues'

(2017) meta-analysis revealed that the assumption of homology, which they argued had permeated the literature, was supported. Although differences in magnitude were noted, no statistically significant differences were found in effect sizes across levels of analysis among the studies included in their review.

Indeed, there has been much organizational research that has considered aggregations of individual-level perceptions as group or team-level phenomenon (e.g., De Cooman et al., 2015; Edmondson, 1999a, 1999b, 2002, 2003; Edmondson & Mogelof, 2005; Kristof-Brown, Seong, Degeest, Park & Hong, 2014; Seong et al., 2015) and also considerable research supporting the isomorphism of constructs across group and individual levels of analysis supporting relationships between team climate as aggregations of individual level perceptions and organizational outcomes (e.g., Schminke, Arnaud, & Taylor, 2015; Vera, Le Blanc, Taris, & Salanova, 2014). This methodological trend has been supported by researchers providing statistical methodology and theory in order to provide justification for homology across levels of analysis (e.g., Guenole, 2016; Woehr, Loignon, Schmidt, Loughry, & Ohland, 2015). While this trend of methodological collectivism has persisted for well over a hundred years, the past decade has seen a renewed of interest in understanding individual level processes that contribute to group and organizational phenomenon (Felin, Foss, & Ployhart, 2015).

The “microfoundations movement” came as a reaction to the emphasis on collective and institutional processes in strategy and organization theory at the expense of understanding the role of the individual in interpreting and interacting with social forces, and creating and maintaining organizational climates and related group-level phenomenon (Felin et al., 2015; Loch, Segupta, & Ahmad, 2013). As such, there has been some criticism that microfoundation theory is a “reinvention of the wheel” with respect to its individualistic focus, and

complementarity to other social science fields that have trended towards a focus on individual-level constructs such as psychology and organizational behaviour (Barney & Felin, 2013). In line with microfoundations theory, this project perceives individual level perceptions of psychological safety as the necessary foundation for team level perceptions of team psychological safety. That is, without individuals perceiving they are psychologically safe in their work environment, there cannot be an aggregated perception of psychological safety at the team level. So while team level perceptions represent a climate of psychological safety in the workplace, the perceptions of such necessarily originate at the individual level. Determining the mechanisms through which this individual perception can be developed has both theoretical and practical merit through its potential to fuel future research with respect to creating environments and organizational cultures that facilitate more macro-level experiences of psychological safety.

Additionally, there have been calls to consider the impacts of culture and context on the development and experience of employee psychological safety (Newman et al., 2017). Edmondson and Lei suggest that “from a practical perspective, psychological safety is a timely topic given the growth of knowledge economies and the rise of teamwork” (2014, p. 24), trends that have increased the need for, and expectations of, employees to engage in collaborative efforts to improve the flow of knowledge and ideas as they work toward shared organizational goals. As workplaces become increasingly diverse, the challenge thus becomes how to integrate diverse perspectives in a manner that is respectful, accepting, and open to risk-taking. Developing an enhanced understanding of the antecedents of psychological safety and exploring psychological safety for individual employees as an outcome in its own right has the potential to inform future research with respect to accessing the benefits of, and mitigating the detrimental effects of, an increasingly diverse workforce. As such, it is worth reiterating the important notion

that without first identifying individual perceptions that one is psychologically safe, there cannot be an aggregated perception of psychological safety at the team level. Perceptions begin at the level of the individual and understanding how individuals perceive certain facets of their workplace environments may result in greater practical relevance for developing and implementing targeted interventions aimed at fostering psychological safety. Individual perceptions are instrumental in understanding the situated context from the participant's point of view.

Rationale for perception-based focus.

Relying on classic social cognition and social information processing theories (Ajzen & Fishbein, 1980; Berger & Luckman, 1966; Mead, 1934; Weick, 1979), Harris (1994) postulated that individuals make sense of their organizational contexts via internal mental dialogues which are influenced by schemas. In organizations, employees rely on schemas are developed as a result of past experiences, precedent set by “like” experiences, and expectations related to perceived outcomes. Employees make sense of their organizational contexts and define themselves within these environments by engaging in internalized conversations between themselves and others (Mead, 1934; Weick, 1979). This internal dialogue facilitates the perspective taking of others and an interpretation of the dynamics of the context, resulting in the development of individual perceptions of the likelihood of a given outcome in a specific context. Perception then dictates resulting actions and experiences.

This research study collected data from a single source in order to capture individual level perceptions of all variables being measured. A significant body of research examines organizational constructs such as fit and value congruence using cross-sectional designs, and single source data. For example, researchers have examined perceptions of social media policies

and person-organization fit (Cho, Park & Ordóñez, 2013) and perceived organizational support and turnover intentions (Dawley, Houghton, & Bucklew, 2017). Other work has explored one's sense of belonging to the organization and fit with supervisors values (Dávila & Garcia, 2012), perceived corporate social responsibility (Glavas & Godwin, 2013), and perceptions of fairness and satisfaction (Nelson & Tarpey, 2010). Likewise, using a cross-sectional approach and single source data researchers have studied personal and organizational value congruency (Posner, 2010), goal congruence and person-organization fit (Supeli & Creed, 2014), leadership, organizational citizenship behaviour, and fit (Vondey, 2010), and perceptions of procedural justice and trust (Yoo, Huang, & Lee, 2012).

Theories of situated cognition suggest the importance of perceptions in navigating social experiences and making sense of our environments (Semin & Smith, 2013; Smith & Collins, 2010). In fact, a search of Google Scholar for articles ("the importance of ** perceptions") published since 2014 revealed more than 2100 sources which highlight the importance of identifying, researching, and understanding individual level perceptions of a variety of social phenomenon (e.g., student perceptions of academic interventions, Eckert, Hier, Hamsho, & Malandrino, 2017; patient perceptions of lung cancer risk, Busse, Regelman, Chirhambaram, & Wagner, 2017; employee perceptions of organizational talent management practices, Vaiman, Collings, & Scullion, 2017; and employee perceptions of organizational support, Odle-Dusseau, Hammer, Crain, & Bodner, 2016). In the majority of cases, the authors cited the importance of understanding such individual level perceptions for program development and implementation, and ongoing organizational learning and program evaluation. Individual perceptions were thus instrumental in understanding the situated context from the participant's point of view.

Summary. Framed by the social cognition, social information processing and situation cognition perspectives, the present research sought to explore the mechanisms through which an employee perceives psychological safety in the workplace, with an emphasis on the impact of employees' perceptions of how they fit within their employment context and whether or not they have trust in their working relationships. To be consistent and clear, the current project considered psychological safety as an individual-level construct and will examine the relationship between individual-level perceptions of fit and trust and the impact of these constructs upon perceived psychological safety as an individual-level outcome. As such, the subsequent section explored the role of cultural sense-making and perception in how individuals interpret and process their contexts. Cultural sense-making and cultural salience both impact and are impacted by organizational cultures. The following discussion provides a basis for understanding the role of organizational values and norms in making employees feel connected to and compatible with their work environments and thus develop a sense of psychological safety in their work spaces.

Social identity, cultural sense-making, and cultural salience

Social categorization theory proposes that individuals define their self-concept in part by the memberships they hold (Turner, 1985; Turner et al., 1987). That is, individuals derive part of their self-identity via the groups to which they belong. Because individuals often belong to multiple groups simultaneously, self-concept can be “fluid” in the sense that it can be situationally-dependent, whereby different aspects of an individual's self-concept may be more salient in a given situation over another (Markus & Cross, 1990). Oyserman (2011) suggests that contextual cues activate relevant cultural mindsets which shape perception, reasoning and

response, and thus activate the meaning systems through which self-identity and self-concept have been created. The importance, or salience, of psychologically meaningful features of one's immediate context influences which cultural mindsets are activated in a given situation (Oyserman, Sorensen, Reber, & Chen, 2009). These features can include tangible, surface-level elements (e.g., sex, ethnicity, age), as well as deep-level elements such as values, attitudes, and goals. Individual assessments of the meaningfulness of a given feature or constellation of features will determine an individual's perceptions of compatibility, congruence, and connection to referents within that environment.

For example, research examining bicultural identity has explored the notion that cultural primes (contextual cues that make one cultural frame of reference more salient than another in a given context; Oyserman, 2011) can influence thought and behavioural patterns in bicultural individuals and can result in *cultural frame switching* (Benet-Martínez, Leu, Lee, & Morris, 2002; Benet-Martínez & Haritatos, 2005; Hong, Ip, Chiu, Morris, & Menon, 2001; Hong, Morris, Chiu, & Benet-Martínez, 2000). Cultural frame switching (Hong et al., 2000) is defined as the process whereby individuals shift “between different culturally based interpretive lenses in response to cultural cues” (Benet-Martínez & Haritatos, 2005, p. 1018). Because bicultural (or multicultural) individuals have more than one internalized cultural meaning system, they are able to access different meanings and systems, and adjust interpretations of contextual information and circumstances in order to behave in culturally appropriate ways consistent with the most salient cultural cues and context. Biculturalism and acculturation literature suggests that individuals differ with respect to how they integrate, manage, and experience multiple meaning systems, including the degree to which individuals subjectively perceive the tension between mainstream and heritage cultural systems (Benet-Martínez et al., 2002; Berry, 1997; Berry,

Phinney, Sam, & Vedder, 2006; Boski, 2008; Ryder, Alden, & Paulhus, 2000, Tsai, Ying, & Lee, 2000; Vivero & Jenkins, 1999). In fact, recent research by Stonefish and Kwantes (2017; Kwantes & Stonefish, *submitted*) revealed that Indigenous Canadians clustered into four different groups based on preferred acculturative strategy, differentially endorsing values and leadership styles according to acculturative strategy preferences.

While surface-level elements of the context may provide numerous cues which activate relevant cultural mindsets, deep-level contextual features are also important in the sense-making process as individuals must interpret and make meaning of the values, goals, and norms that dictate conduct, relationships, and operations within a given environment and assess their relative compatibility, or fit, within it. Social categorization theories suggest that individuals are driven by the desire to maintain a positive self-identity, to maintain positive relationships with groups which are characterized by similar features salient to themselves, and to maintain distinctiveness between in-groups and out-groups (Hornsey, 2008). Once distinctions have been made between groups, perceptions of congruence between individuals' characteristics, including their values, goals, and ideals, foster perceptions of belongingness, compatibility, trust, and fit within a given group or categorization (Abrams & Hogg, 2010). This compatibility, or perception of fit, increases the likelihood of cooperation, information sharing, and social learning as a result of increased social identification with other members of the perceived in-group (Abrams & Hogg, 2010).

This process becomes particularly important to understand within the context of the organizational environment. Organizations are nested within social cultures and serve to maintain social culture and norms; however, in the process of doing so, organizations also manifest their own cultures which serve to create structure and maintain order within the

workplace environment. As individuals enter new organizational contexts they undergo a socialization process which enculturates them into the existing organizational culture. Hofstede, Hofstede, and Minkov's (2010) definition of culture as a "collective phenomenon" (p. 6) – the shared feelings, thoughts, and patterns of behaviour expressed by a collection of people who share the same social environment. Culture thus, is "the collective programming of the mind that distinguishes the members of one group or category of people from others" (Hofstede et al., 2010, p. 6). Erez and Gati (2004) opined that culture is manifested on multiple planes and intersects at the individual, group, organizational, and national/global levels. Organizational culture is nested between an individual's self-identity, values, and beliefs, and the overarching social forces that create cultural meaning.

Organizational culture and climate.

Organizational culture has been defined as the basic assumptions, values, and beliefs characteristic of an organizational setting that are shared by all members which are taught to newcomers during the socialization process. As newcomers are enculturated into the organizational setting they are socialized in the proper ways to think and feel, as current members communicate the myths and stories regarding how the organization came to be the way it is (Schneider, Ehrhart, & Macey, 2013; see also, Hofstede, Hofstede, Minkov, 2010; Schein, 2010). A related construct, *organizational climate*, refers to "the shared perceptions of and the meaning attached to the policies, practices, and procedures employees experience and the behaviors they observe getting rewarded and that are supported and expected" (Schneider et al., 2013, p. 362). Although these constructs come from very distinct theoretical traditions and have different definitions, there remains some debate regarding the distinction between them, often resulting in the terms being used interchangeably in the literature (Hofstede et al., 2010). For

clarity, the present work uses the organizational culture terminology and definition discussed above.

Given that organizational culture is a product of both formal and informal organizational factors and is transmitted through values, norms, and beliefs, organizational culture may have little resemblance to official organizational policies (Behson, 2005; Kirby & Krone, 2002; Timms et al., 2014). Through processes of selection and socialization (Schneider, 1987), employees come to understand the difference between formal policy and acceptable workplace social norms (Denison, 1996). Such informal organizational processes constitute powerful signals that shape employee behaviour (Haggerty & Wright, 2010); in fact, informal mechanisms within an organization are often significantly more impactful on employee outcomes than formal processes (Behson, 2005) and are understood based entirely on participants' perspectives and sense-making (Harris, 1994). Research suggests that the congruence between organizational and employee values and the ability of employees to adapt to organizational norms, is predictive of the relative success of individuals in organizational contexts (Chatman, 1989, Chatman & Flynn, 2001).

Parker et al. (2003) suggest that organizational culture emerges from the constellation of relationships, work roles, and job requirements particular to a given organization. Several scholars agree that an optimal organizational culture would be one that is both psychologically safe and holistically supportive of employees such that non-work factors are recognized as integral to employee well-being (Behson, 2005; Denison, 1996; Dikkers et al., 2004; Timms, et al., 2014). As such, it is important for organizations to establish and reinforce cultures that prioritize employee health and psychological safety in a holistic manner and work to create norms that are consistent with this priority.

The Canadian National Standard draws explicit attention to the impact of leadership and organizational culture, and the extrinsic (e.g., rewards and recognition) and intrinsic (e.g., personal growth) motivators which impact the development of psychologically healthy workplaces (see Table 1). The Standard also explicitly connects organizational culture, work environments and interpersonal relationships characterized by trust, and the need for employees' interpersonal and emotional competencies to fit with the requirements of the work environment, to the development and maintenance of an individual's experience of psychological safety. In the British context, other work has identified managerial and peer support, employment relationships, and role clarity (see Table 2) as essential elements that promote positive psychological outcomes presumably by creating contexts within which employees can feel a part of and connected to the in-group (Houdmont et al., 2013). In contexts characterized by these features, employees are better able to identify with their organizations, leaders, and colleagues resulting in greater perceptions of congruence between these referents and their personal values and beliefs. That is, in organizational environments characterized by the features identified in the Canadian National Standard and by Houdmont and colleagues (2013), employees are better able to make sense of their environment and interpersonal relationships at work, and can do so in ways which lead them to feel as though they have the freedom to express themselves without fear of judgment or reprisal.

Leader role in the maintenance of organizational culture. Leaders play a significant role in disseminating, cultivating, and reinforcing organizational values, norms, and beliefs (McDonald, Pini, & Bradley, 2007; Thompson, Brough, & Schmidt, 2006). Leaders are responsible for the implementation of policies, practices, and procedures related to organizational processes. The ways that leaders implement these organizational features affects

the perceptions of employees with respect to the leader's trustworthiness, integrity, and fairness. Arguably, leaders play an important role in communicating and modeling both the culture and climate of an organization and reinforcing the mechanisms that employees use to construct their own understandings and make sense of organizational policies, procedures, and behaviours (Harris, 1994; Shirey, 2009; Woolley, Caza, & Levy, 2011).

The Canadian National Standards have identified organizational cultures founded on trust and honesty as an important consideration with respect to an employee's psychological safety in the workplace. Moreover, a growing body of research has focused on cultures of trust, within which employees perceive that organizational policies are applied consistently and justly, and that organizational members are trustworthy (Colquitt, LePine, Piccolo, Zapata, & Rich, 2012; Schneider, 2015; van Marrewijk, 2004). Cultures of trust are characterized by openness between employees, support from supervisors, and behavioural integrity (Brien, 1998; Hoffman, Sabo, Bliss, & Hoy, 1994; Hulsart & McCarthy, 2011). These conditions have been shown to reduce uncertainty and risk, thus promoting psychological safety and psychological well-being (Brough & Pears, 2004; Li & Yan, 2009; Skakon et al., 2010). Understanding employee perceptions of their organizational environments and relationships has the potential to fill an important gap in understanding how employees come to feel psychologically safe in the workplace. The following sections describe a number of related theories and areas of research which provide insight into understanding the mechanisms that enable employees to feel comfortable and integrated into their work environments. Theories of cultural fit (perceptions of how individual employees see themselves as fitting into the culture of an organization and with its members) provide a useful means to advance understanding of precursors to the development of psychological safety as an important individual-level outcome.

Cultural Fit**Theoretical paradigm.**

Social categorization and social identity theories provide the theoretical underpinnings for research on cultural fit. This research suggests that employees possess mental prototypes of ideal members and organizational context against which they judge fit (Chatman, 1991, Kristof, 1996). According to social identity theory, employees enhance and confirm their self-concepts, by choosing to enter or remain with organizations they perceive as congruent in terms of values and ideals, and which employ other individuals also perceived as highly similar (Tsui, Egan, & O'Reilly, 1992). In fact, Tajfel's (1978) early theorizing suggests that the process of distinguishing between in- and outgroups enhances similarities with in-group members and highlights differences with outgroup members, activating one's own self-identity (personal and social). Perceptions of fit are thus based on interpersonal comparisons interpreted through lenses of personal and social identity (Turner et al., 1987).

Indeed, Oakes and colleagues suggest that categorization and identification occurs as functions of both accessibility and fit (Oakes, 1987; Oakes, Turner, & Haslam, 1991). The extent to which social categories are perceived to reflect social reality indicates the perceived level of fit. However, social categorization theories extend this proposition by suggesting that categorization processes are to some degree fluid and dynamic according to the context and the salience (accessibility) of relevant characteristics which denote in- versus outgroups (Hornsey, 2008).

Employees in diverse contexts may be faced with integrating multiple personal meaning systems, but also with creating new shared meanings at work. As such, in the organizational context managing cultural meaning systems becomes increasingly complex as culture impacts

how well individuals fit into organizational contexts (Chatman, Polzer, Barsade, & Neale, 1998; Hofstede et al., 2010; Rousseau, 1990). Organizational culture, which as noted above, has been defined as the shared basic assumptions, values, and beliefs that characterize an organization that are communicated during employee socialization and integration processes, is interpreted through the cultural lenses of organizational members and nested within the larger social context. Because of the complexity of organizational settings and the amount of time that employees spend in their workplaces, understanding how employees navigate multiple meanings systems becomes an important means of understanding why and how some employees find greater success integrating into workplace environments (Chatman, 1989) and enjoy greater wellbeing once there. Two separate, but connected bodies of research address the challenges of cultural fit in the workplace: person-environment fit research and organizational demography.

Person-environment fit.

The match between employee characteristics and their work environments is very generally referred to as person-environment fit (Greguras & Diefendorff, 2009) and includes a range of levels including an individual's fit to work groups and colleagues, her/his organization, and organizational leadership (Kristof-Brown, Zimmerman, & Johnson, 2005). Understanding the match between employees and their work environments has proved one of the predominant research areas in organizational behaviour (Kristof-Brown, et al., 2005; Schneider, 2001) and is an important, albeit overlooked, consideration for understanding the mechanisms through which employees come to feel psychologically safe and secure in their work environments. It is plausible to consider that employees who feel connected to their work contexts as a result of the match between their personal traits, goals, aspirations and those of their workplace, leaders and coworkers may feel more comfortable expressing themselves at work and taking interpersonal

risks. This match may provide an important mechanism through which employees can realize this comfort and interpret their workplace relationships as safe environments where their actions and intentions will be given the benefit of the doubt. Moreover, research indicates that trust can occur very quickly and “implicitly” when one views or perceives others as similar on some salient characteristic or within the parameters of a specific context (Goldsmith, 2005; Jones & Shah, 2016; Kahneman, Slovic, Slovic, & Tversky, 1982). Considering this possible connection, the present research will examine three types of person-environment fit (person-organization, person-leader, and person-coworker) and how these relate to psychological safety.

Person-organization fit. Chatman and colleagues (Chatman, 1989, 1991, 1998; Chatman & Flynn, 2001; O’Reilly, Chatman, & Caldwell, 1991) proposed that *fit* between the person and the organization was an important consideration in predicting the relative success (i.e., performance, ability to integrate, team cooperation, intent to remain, commitment) of an individual within his or her organizational context. According to Chatman (1989), person-organization fit refers to “the congruence between the norms and values of organizations and the values of persons” (p. 339). Therefore, in the workplace, person-organization fit is influenced by the values individuals hold coming into an organizational setting, as well as the organizational culture that exist at the time the individual enters. Chatman and colleagues suggest (Chatman, 1989, 1991, 1998; Chatman & Flynn, 2001; O’Reilly et al., 1991) that the identification of similarities and differences in values can facilitate prediction of the kinds of behaviour and normative changes that may occur over time.

Schneider and colleagues (Schneider, 1987; Schneider, Goldstein, & Smith, 1995) lamented what they perceived as a failure in the organizational literature “to integrate the individual and organizational foci of theory and research” which inhibited “a full understanding

of the reciprocal relationships that exist between individuals and their employing organizations” (Schneider et al., 1995, p. 747). Similar to Chatman and colleagues’ (Chatman, 1989, 1991; O’Reilly et al., 1991) theorizing and research on the fit between organization values and personal values (person-organization fit framework; POF), Schneider (1987) sought to define the relationship between individuals and the organizational environment they interacted with at work. Schneider and colleagues (Schneider, 1987; Schneider et al., 1995) proposed that organizational culture was a function of the people who constitute that culture. Specifically, organizational cultures are representations of the values, assumptions, beliefs, and goals of founders and leaders, which result in policies, structures, and norms to facilitate the achievement of goals consistent with founders’ values, and which are enacted and sustained via organizational members (Schneider et al., 1995). Furthermore, over time this process determines the kinds of individuals who are attracted to various organizations, the types of people who are selected to become part of organizations, and influences decisions to remain organizational members resulting in a largely homogenous workforce. Schneider (1987) considered his attraction-selection-attrition (ASA) model an advancement over the POF model due to the fact that the ASA model was person-centred, arguing that this conceptualization meant that the situation was not dependent upon the people in the setting, rather “the situation *is* the people there behaving as they do” (Schneider et al., 1995, p. 751, emphasis in original). Later Schneider and colleagues updated the ASA model to include a second “S” the organizational *socialization* literature (Schein, 1968; Van Maanen & Schein, 1979) to account for the processes through which new employees acculturate to work environments and organizational culture (Schneider, Smith, Taylor, & Fleenor, 1998). In both frameworks, POF and ASA/ASSA, incongruence between

organizational culture (values and norms) and personal values and ideals result in dissatisfaction and intentions to quit.

Recognizing the interconnectedness of social and organizational cultures, Aycan and colleagues (Aycan, Kanungo, & Sinha, 1999; Aycan, Kanungo, Mendonca, Yu, Deller, Stahl, & Kurshid, 2000; Kanungo & Jaeger, 1990; Mendonca & Kanungo, 1994) advanced a Model of Cultural Fit that explained the relationship between the sociocultural environment, organizational culture, and employee perceptions of human resource management practices (e.g., supervision, job design, justice, reward systems (Aycan et al., 1999). The basic premise of this model is that leadership functions within an organization are founded on a variety of assumptions (task- and employee-based) which are shaped by both social culture and enterprise characteristics (i.e., private vs public sector, industry, market competitiveness, labour market, and available resources; Aycan et al., 1999). Moreover, social culture shapes employee perceptions with respect to organizational leadership, hierarchy, support, justice, and responsibility (Hofstede et al., 2010).

Considering the models of cultural fit discussed above, evidence supports the needs for employees to feel as though they fit, or are compatible with, their organizations, their leaders, and their coworkers. Being able to feel a part of, or connected to, the work environment allows employees to feel comfortable and connected in their work spaces as they can identify with organization, leader and member values and are therefore more likely to remain satisfied with their work and committed to the organization. Despite the wealth of literature examining a variety of individual and organizational outcomes related to person-organization fit, the relationship between perceived fit and perceptions of psychological safety has been overlooked. Given the growing social importance of developing psychologically safe work environments, the

field of organizational psychology would benefit from exploring the mechanisms through which employees feel psychologically safe at work.

Kristof-Brown and colleagues (2005) meta-analyzed research examining the relationships between person-job, person-organization, person-group, and person-supervisor fit and a number of individual-level outcomes including positive relationships with coworkers, organization, job, and supervisor satisfaction, trust in managers, group cohesion, organizational commitment, and LMX, and negative relationships with strain, intention to quit, and turnover (*c.f.*, Adkins & Caldwell, 2004; Elfenbein & O'Reilly III, 2007; Greguras & Diefendorff, 2009; O'Reilly et al., 1991; Verquer, Beehr, & Wagner, 2003). Moreover, Chatman's (1991) research found that person-organization fit predicted employee satisfaction and that as an employee's values became more aligned with organizational values over the first year, a corresponding increase in satisfaction also occurred. Subsequent work by Chatman and Flynn (2001) revealed that demographic heterogeneity was negatively related to members' satisfaction with their team experience; however, they also found consistent support for the mediating role of cooperative norms. That is, when cooperative norms were emphasized in teams, demographic heterogeneity was less detrimental to team member satisfaction and groups were more efficient and effective.

Summary. This literature review suggests that person-organization fit has been found to be related to a number of similar outcomes as psychological safety including performance, employee engagement and job satisfaction, and turnover. However, to date there has not been published research conducted to examine the relationship between person-organization fit and perceived psychological safety. The present research addressed this gap. Employee perceptions of fit with their organization leads to many positive outcomes as identified above. These outcomes have the potential to increase employee perceptions of psychological safety as a result

of felt congruence with the work environment and increase comfort and compatibility in this context. As employees enjoy greater comfort and sense a stronger match between their values and those of their organization, employees should come to experience a heightened sense that they are free to be themselves in the workplace and share thoughts and opinions freely without fear.

Person-leader fit. More recent research has similarly supported the need for value congruence between leaders and followers. For example, Marstand, Marting and Epitropaki's (2016) findings suggest that a leader's ability to fulfil employees' work values was related to job satisfaction, task performance and organizational citizenship behaviours. In a Chinese sample of leaders and their followers, Bai, Dong, Liu, and Liu (2017) found that leader-follower value incongruence was associated with follower psychological workplace strain; however, their research also revealed that leaders' political skill moderated this effect. Leaders who are "politically skilled" are socially savvy and easily able to perceive followers' values, thoughts, and emotions, which enables such leaders to effectively influence them in a sincere, engaging manner that disguises any ulterior motives while inspiring believability, trust, and confidence (Bai et al., 2017). When followers have confidence in their leaders and perceive them as trustworthy, this can increase follower resources for coping with psychological workplace strain (Ferris, Treadway, Kolodinsky, Hochwarter, Kacmar, Douglas, & Frink, 2005). While psychological strain is not the antithesis of psychological safety, it is plausible to consider that employees experiencing psychological workplace strain would feel less safe to engage in interpersonal risk at work. A perceived mismatch between employees and their leaders would result in employees being less likely to speak up or challenge leadership (i.e., perceive less psychological safety). This literature review was not able to find research to this effect; however,

research has found relationships between person-leader value congruence and employee voice behaviours which is conceptually similar to psychological safety (Lee, Choi, Youn, & Chun, 2017; Wang, Hsieh, Tsai, & Cheng, 2012). Given this conceptual similarity it is anticipated that when individuals perceive congruence between themselves and their leaders they will be more likely to report perceptions of psychological safety. Furthermore, given the factors advanced by subject matter experts in the Canadian National Standard, leader support and clear leadership and expectations impact psychological safety providing practical support for the assumed relationship between person-leader fit and psychological safety.

Person-coworker fit. Just as leaders transmit important information to employees regarding norms and appropriate workplace behaviors, employees often look to their peers and other workers for cues (Van Maanen & Schein, 1977; Wiesenfeld, Raghuram, & Garud, 2001). Correspondingly, in the context of individuals and their coworkers, a variety of research has revealed that similarity on goals (Kristof-Brown & Stevens, 2001; Witt, 1998; Witt, Hilton, & Hockwarter, 2001), value (in)congruence (Adkins & Caldwell, 2004; Elfenbein & O'Reilly III, 2007), similarity on preferences for working climates (Burch & Anderson, 2004, 2008), and perceived congruence with respect to working pace and style (Jansen & Kristof-Brown, 2005; Polzer, Milton, & Swann, 2002) have been shown to predict satisfaction with team members, feelings of cohesion, strain, and individual performance. Expanding on this evidence to explore diversity antecedents (gender, age, education level, and work experience) and their relations to perceptions of both complementary fit (team members' have the requisite knowledge, skills, and abilities required by the task) and supplementary fit (the perception that team members share the same goals and values) in the person-group context, research by Seong and colleagues (2015) supported positive relationships between perceptions of group-level fit and group level

outcomes, including social cohesion, group performance, and perceptions of team knowledge and information sharing (Seong, Kristof-Brown, Park Hong, & Shin, 2015). Similar to person-organization and person-leader fit constructs, there remains a gap in the literature with respect to understanding how employees' perceptions of fit with coworkers impacts their perceptions of psychological safety at work. Self-categorizations theories support this connection as employees who identify strongly with their coworkers would experience a greater sense of trust and compatibility and thus be more inclined to speak freely and engage in knowledge sharing and social learning in the workplace.

Organizational Demography. The second important body of research which has been undertaken largely separate from the domain of cultural fit or person-environment fit research, is that of organizational demography. Organizational demography research seeks to understand how demographic heterogeneity within an organization affects organizational and performance outcomes (e.g., Pfeffer, 1983; Wagner, Pfeffer, & O'Reilly, 1984). Relational demography is a more narrowed stream of this line of research which specifically examines the comparative demographic characteristics of group members and explores how this affects member outcomes (Riordan, 2001; Riordan & Wayne, 2008; Tsui, Egan, & O'Reilly, 1992; Tsui & O'Reilly, 1989; Vecchio & Bullis, 2001; Zatzick, Elvira, & Cohen, 2003). Consistent with person-environment fit theories, organizational and relational demography research draws on social categorization and social identity theories and examines the (mis)fit of employees to their employment context (Westerman & Cyr, 2004; Wharton, 1992). These theoretical paradigms underscore the personal and social identity mechanisms through which individuals engage in interpersonal comparisons and interpret relative similarity. Overall, research examining the effects of diversity in the workforce has largely been inconclusive producing mixed results.

For example, research has found negative relationship between demographic characteristics (e.g., job tenure, sex, and ethnicity) and work attitudes and performance (e.g., Chatman & Flynn, 2001; Chatman, et al. 1998; Pelled, Eisenhardt, & Xin, 1999; Smith, Smith, Olian, Sims, O'Bannon, & Scull, 1994). Likewise, there has been empirical evidence to suggest that individuals in more heterogeneous groups experience lower levels of satisfaction and organizational commitment (Mueller, Finley, Iverson, & Price, 1999; Riordan & Shore, 1997), are more likely to experience greater degrees of conflict (Jehn, Northcraft, & Neale, 1999; Paustian-Underdahl et al., 2017; Pelled et al., 1999), are more likely to experience poor communication (Mehra, Kilduff, & Brass, 1998; Paustian-Underdahl et al., 2017), are less likely to be integrated into the group (Harrison, Price, Gavin, & Florey, 2002; Martins, Milliken, Wiesenfeld, & Salgado, 2003; O'Reilly, Caldwell, & Barnett, 1989; Schaffer & Riordan, 2013; Smith et al., 1994), have lower levels of performance (Chatman & Flynn, 2001; Flynn, Chatman, & Spataro, 2001; Mayo, Pastor, & Meindl, 1996; Tsui & O'Reilly, 1989), and are more likely to leave the group (O'Reilly et al., 1989; Sorensen, 2000; Tsui et al., 1992;). Evidence suggests that homogenous groups have group members who experience higher levels of satisfaction and commitment, stay longer in the organizations, have higher ratings of liking and report liking group members more, have higher job performance, and typically exhibit less turnover (e.g., Joshi & Roh, 2009; O'Reilly et al., 1989; Schneider et al., 1998; Wagner, Pfeffer, & O'Reilly, 1984; Watson, Kumar, & Michaelson, 1993; Williams & O'Reilly, 1998)

Although these bodies of research (person-environment/culture fit and organizational/relational demography) have been undertaken largely independent of each other, there is a growing domain of research that has resulted in an insightful integration of the two streams, that seeks to more comprehensively address the issues regarding the benefits (obstacles)

to diversity and fit in the workplace. Such research has explored surface and deep-level diversity finding that group tenure may attenuate the effects of surface-level differences (sex, ethnicity) and strengthen the effects of deep-level differences (values, attitudes, goals; e.g., Harrison, Price, & Bell, 1998; Turban, Dougherty, & Lee, 1999). Research has revealed that as individuals become more familiar with dissimilar others, deep-level diversity characteristics, such as attitudes, values, and personality begin to supersede in importance as compared to surface-level characteristics (Cable & Judge, 1996; Elfenbein & O'Reilly III, 2007; Harrison et al., 2002; Ostroff & Rothausen, 1997; Polzer, Milton, & Swann, 2002).

For example, several studies show that the initial negative effects of demographic heterogeneity may be attenuated after time, as people learn about their similarity on underlying values. This re-evaluation of differences has the effect of mitigating the negative effects of performance and group processes (Chatman et al., 1998; Chatman & Flynn, 2001; Harrison et al., 2002; Martins et al., 2003). This research suggests that some of the discrepancy in findings, with respect to the positive or negative effects of diversity may be mitigated by time as individuals come to recognize they share similar deeper-level characteristics (Elfenbein & O'Reilly III, 2007; Flynn et al., 2001; Spataro, 2002). Similarity-attraction and social categorization theories are essential cognitive theories of perception which are foundational to relational demography research; however, they do not account for how initial judgments of similarity or social category may change after time. Individuals may be attracted to others based on surface-level, visible characteristics that are similar to their own. After a period of time, these initial and similar characteristics may become less appealing as individuals come to realize they do not share similar needs, goals, or values. On the other hand, as individuals become more familiar with those previously considered dissimilar, they may come to appreciate each other as

they develop a shared understanding of underlying similarities (Flynn & Chatman, 2003). It is plausible that effects of diversity may change over time, becoming more positive or negative as individuals discover deeper level similarities and differences, accounting for some of the inconsistency reported in the diversity and relational demography research (Elfenbein & O'Reilly III; Riordan, 2001). Nonetheless, it is important to interpret these studies with caution as the evidence is predominantly inferential, suggesting that variables such as time, personality, or norms can have an effect without explicitly investigating both person-culture and demographic fit (Chatman & O'Reilly, 2004; Chattopadhyay, 1999; Elfenbein & O'Reilly III; Lovelace & Rosen, 1996).

Summary. Research on organizational demography, cultural fit, and workplace diversity provides a wealth of support for the benefits of perceiving that one is part of, or well suited to the environment within which they work. Certainly, several individual and organizational outcomes can be achieved via better alignment between an individual's values, goals, and beliefs and those of leaders, coworkers, and the organizational as a whole. Research suggests that increased perceptions of demographic similarity with organizational referents is related to a number of individual and organizational outcomes including job satisfaction, commitment, and retention; however, group heterogeneity cannot solely account for perceptions of congruence within an organization.

A gap in these areas has been highlighted by researchers who advance calls for exploring multiple types of fit to provide a more holistic account of how individuals perceive themselves within an organizational context and how their perceived fit impacts individual and organizational outcomes (Joshi, Liao, & Roh, 2011; Kristof, 1996; Seong et al., 2015; Shore, Randel, Chung, Dean, Ehrhart, & Singh, 2011; Westerman & Cyr, 2004). Relationships with

organizational referents occur concurrently and a focus on one aspect of fit fails to account for the multiple other avenues that impact outcomes.

To address this gap, the current project explored perceived demographic similarity (with regard to age, gender and ethnicity) and perceptions of organizational fit to three referents (person-organization, person-leader, and person-coworker). This exploration was undertaken in order to provide a more comprehensive understanding of the multiple sources of fit in the workplace and how contextual factors may influence employees' perceptions of psychological safety in the workplace. Furthermore, in consideration of the literature describing the potential effects of time on perceptions of similarity, this research considered the role of tenure in the relationship between perceptions of similarity and perceived fit. The longer an individual works in an organization, with a given supervisor, and with immediate colleagues, "liking" may increase or decrease as a result of the degree of perceived similarity on demographic variables, and perceptions of value similarity be enhanced or diminished. It is noted that, although this exploration is more comprehensive than an examination of a single fit construct to a single referent, the selection of referents and perceived demographic similarity characteristics are done at the exclusion of other relevant fit indices and referents that may be present in the workplace (e.g., person-role or person-vocation fit, or perceived demographic similarity with respect to level of education, socio-economic status, or skill set).

From a theoretical perspective, a multi-referent exploration across a wider scope of fit has the potential to provide a more thorough understanding of the variety of ways that fit may impact individuals at work and which types of fit are in fact most impactful. The preceding review of the literature suggests three other notable deficits: research positioning psychological safety as the outcome of interest, research examining perceptions of psychological safety as an individual-

level outcome, and research bridging the study of cultural fit, relational demography, and psychological safety. Furthermore, several calls have been advanced for future research to identify antecedents of psychological safety.

Psychological safety research has been growing in recent decades albeit at the neglect of empirical studies identifying determinants of individual level perceptions of psychological safety. Given the centrality of work to our daily lives and recent social trends toward promoting and protecting employee psychological health and safety, this line of research provides an avenue for understanding how best to develop perceptions of psychological safety in individuals. Bridging the literatures of fit, relational demography and psychological safety has the potential to provide insight into the role that value congruence and demographic similarity might play in promoting psychological safety.

Trust

The field of trust research has enjoyed a vibrant scholarship across multiple disciplines including sociology, social work, psychology, ethics, management and economics. Research has revealed that trust has significant implications in a number of important arenas of social interaction; for example: communication and knowledge sharing (Cai, Goh, de Souza, & Li; 2013); health care, counselling, and patient self-care (Rowe & Kellam, 2010); risk taking and job performance (Colquitt, Scott, & LePine, 2007); and supervision and leader-member exchange (Stinson et al., 2013; Sue-Chan, Au, & Hackett, 2012; Werbel & Henriques, 2008). With specific regard to organizations, a substantial body of literature exists providing evidence of the central role that trust plays in the workplace largely building on seminal work of Mayer, Davis and Schoorman (1995). A recent multilevel – multi-referent review of the trust literature revealed relationships with trust and numerous organizational-level outcomes such as employee

satisfaction, effort and performance, employee citizenship behaviours, collaboration and teamwork, leadership effectiveness, perceptions of human resource management practices, and negotiation success (Fulmer & Gelfand, 2014). In this section, the literature on trust will be discussed first by presenting a definition of trust and the theoretical paradigms that have shaped conceptualization of the construct and research in the field. The distinction between trust (an action or behaviour) and trustworthiness (characteristics of a trustee) will be briefly highlighted in order to position how trust is conceptually distinct from psychological safety and how it will be examined in the context of the present research. Finally, a discussion of the important implications of trust with respect to organizational referents will include research on trust in organization, trust in leader, and trust in coworkers.

Trust defined.

Rousseau and colleagues (1998) defined trust as the willingness of one person or party to be vulnerable to the actions of another. With respect to the relationship between the trustor and the trustee, a basic assumption underlying the definition of trust, is that the trustee will act positively; that is, the trustee will not exploit the situation under which trust occurs and will act in a manner that has benefit to the trustor (Mayer et al., 1995). Despite this basic assumption, in any relationship the potential exists for imbalance in the processes of social exchange. These imbalances may be particularly salient in the workplace due to the inherent hierarchical nature of organizations and especially of leader-follower relationships.

McAllister's (1995) classic work, defined trust as "the extent to which a person is confident in, and willing to act on the basis of the words, actions, and decisions of another" (p. 25). In interpersonal relationships, and especially in the organizational context, the trustor must believe that the trustee's words and actions are sincere and that her/his decisions are made with

integrity. This definition is particularly relevant to the organizational context as trust has been shown to result in higher levels of cooperation and more positive individual and organizational outcomes (Dirks & Ferrin, 2002).

As mentioned above, although trust and psychological safety share common elements of vulnerability and risk, they are distinct constructs distinguishable by the direction of vulnerability and the entity from which, or to which, assessments of trust or psychological safety are made. Following Yamagishi and colleagues' conceptualization of generalized trust as believing in the positive intentions of others, especially in social situations characterized by interpersonal uncertainty (Yamagishi, Cook, & Watabe, 1998; Yamagishi & Yamagishi, 1994), trust in the context of this research is considered a generalized global assessment and one presumed to be most heavily influenced by a cognitive appraisal based on participants previous experiences with the trust referent. Trust judgements are made based on assessments of anticipated behaviours on the part of the trustee – the trustor gives the trustee the benefit of the doubt that the trustee is worthy of trust, based on assessments of actions or character (McAllister, 1995). On the other hand, psychological safety perceptions are formed based on the assessment of whether or not the trustee will bestow the benefit of the doubt upon the trustor, making interpersonal risk taking more or less safe (Frazier, et al., 2017). Furthermore, whilst trust constitutes part of the relationship process between the trustor and the trustee, perceptions of psychological safety also describe cognitive appraisals related to contextual norms and how others in the workplace will respond to interpersonal risk-taking in the workplace (Carmeli & Gittell, 2009). Trust is a judgement of the intentions, character, and actions of an entity and an appraisal of the level of risk involved with engaging in interpersonal interactions in a given situation with that entity. Perceptions of psychological safety are judgements of the interpersonal

risk tolerance norms within a given context and assessment of the safety to engagement in interpersonal risk-taking within the constraints of those norms. In other words, perceived psychological safety is an expectation about what will be experienced in given context.

Trust conceptualized.

When discussing trust it is important to be explicit about its conceptualization (Fulmer & Gelfand, 2012). Depending on the intent of the research, trust has been conceptualized and/or defined as an unchanging trait, a process, or an emergent state (Burke, Sims, Lazzara, & Salas, 2007). For example, research suggests that within every individual is a general propensity to trust and a general tendency to make positive attributions about another's intentions (Rotter, 1954, 1967). This perspective views trust as a relatively enduring characteristic underlying all assessments of trustees. In fact, some consider propensity to trust as the central characteristic underlying trustor judgements on the trustworthiness of others (Mayer et al., 1995).

Other research suggests that trust emerges as result of contextual factors and need, and may either develop slowly over time (Marks, Mathieu, & Zaccaro, 2001) or very swiftly (Coppola, Hiltz, & Rotter, 2004). From this perspective, trust in a given referent may be linked to a specific context, may be very specific to certain situations, and is primarily considered an attitude. It can be developed or broken due to specific interactions and may be more tenuous over time (Burke et al., 2007). Trust can also be conceptualized as a process through which other important behaviours, attitudes, or outcomes may be strengthened or weakened (Burk et al., 2007). Researchers have also considered trust in terms of actions (Pillutla, Malhotra, and Murnighan, 2003), intentions (Colquitt, et al., 2007, Mayer et al., 1995), and beliefs (Ferrin & Dirks, 2003, Mayer et al., 1995).

McAllister conceptualized trust as comprising affective and cognitive components.

Affective-based trust is developed as a result of emotional connections with the trustee (McAllister, 1995); whereas cognitive-based assessments of trust are derived from perceptions of the reliability, dependability, and competency of the trustee (Mayer et al., 1995, McAllister, 1995). Both bases are important in the context of interpersonal trust development, but for different reasons (Dirks & Ferrin, 2002; Lewicki, Tomlinson, & Gillespie, 2006). For example, affective-based trust may increase identification with the trustee in the process of social exchange and thus may foster perceptions of care and concern, increasing the likelihood of reciprocity in the developing relationship (Wang, Tomlinson, & Noe, 2010). Similarly, and with consideration to the review of the person-environment fit literature discussed above, fit between the trustor and the trustee may lead to interpersonal identification, and in turn, trust.

Alternatively, cognitive-based trust may result as consequence of assessments of the competence and character of the trustee which serve to diminish the perception of risk or vulnerability in the relationship (Mayer & Gavin, 2005; Wang et al., 2010). Given the fact that affective-based trust may result in stronger emotional attachments, and cognitive-based trust may result in a stronger connection to the trustee based on congruence between what the trustor values in terms of integrity and competencies, one can assume that trust will influence the outcomes of person-environment fit in organizations.

Trust versus Trustworthiness. The act of trusting occurs between a trustee and a trustor. Özer, Zheng, and Chen (2011) argue that trustors worry about potential costs associated with vulnerability and risk. Trustworthiness is a perceived personal characteristic of the trustee which is a necessary antecedent to trust as a behavioural intention (the active intention of the trustor; Colquitt et al., 2007; Fulmer & Gelfand, 2014; Lewis & Weigert, 1985). While some research

suggests that trustworthiness has been considered synonymous with trust (Colquitt et al., 2007), Fulmer and Gelfand (2014) urge more consistency in this regard. Trustworthiness refers to the perceived characteristics of a trustee that facilitate the fulfillment of the trustor's expectation that the trustee will perform a particular action (Butler, 1991; Mayer et al, 1995; Rousseau et al., 1998). Mayer and colleagues (1995) conceptualize trustworthiness as comprised of three components: ability, benevolence, and integrity. Ability refers to the specific "skills, competencies, and characteristics that enable a party to have influence within some specific domain" (Mayer et al., 1995, p. 717). Benevolence refers to the concept that the trustee acts without the motives of personal gain, but acts with the intent of "doing good" to the trustor; whereas integrity is defined as the extent to which the trustee adheres to moral and ethical principles valued by the trustor (Mayer et al., 1995).

Whereas some theorists suggest that the relevance of these components is intuitive, others criticize this conceptualization as too broad (Werbel & Henriques, 2009). For example, Butler (1991) proposes that trustworthiness comprises 10 conditions: integrity, availability, openness, loyalty, promise fulfillment, competence, fairness, discreteness, receptivity, and reliability. Cunningham and McGregor (2000) provide strong arguments for the inclusion of predictability (or reliability) as factoring in the judgement of trustworthiness; a characteristic particularly important in the organizational context (Dietz & den Hartog, 2006). Similarly, Spreitzer & Mishra (1999) theorize trust as including facets of concern, reliability, competence, and openness. Whitener and colleagues conceptualize trustworthiness according to five behavioural categories: behavioural consistency; behavioural integrity; sharing and delegation of control; communication; and demonstration of concern (Whitener et al., 1998, p. 516). However, despite criticisms that suggest that Mayer and colleagues' (1995) components of trustworthiness result in

an overly generic approach to the analysis of trust giving (Werbel & Henriques, 2009), Mayer et al.'s dimensions have provided a parsimonious conceptualization that facilitates empirical research (e.g., Colquitt & Rodell, 2011; Colquitt et al., 2007; Dirks & Ferrin, 2002).

Other conceptual distinctions. Luhmann (1979, 1988) made several contributions to distinguishing trust from other conceptually similar constructs relevant to the present research exploring employee perceptions of organizational referents. Of particular significance are the concepts of confidence and familiarity. Indeed, in relation to perceptions of fit with organizational referents, familiarity has the potential to inform perceptions of similarity, liking, and perceived congruence on a number of interpersonal elements. However, familiarity does not equate to trust. Familiarity reduces complexity in relationships because it is based on past experiences and although trust may be achieved in a familiar context, trust is also based on anticipated risk associated with decisions made for the future (Luhmann, 1979, 1988).

Confidence differs from trust with respect to attributions and agency. Luhmann (1988) argues that risk occurs in a situation when the likelihood of negative outcomes is potentially greater than positive outcomes. If an individual chooses one action over another despite the risk of disappointment and unmet expectations, this is trust. However, confidence is the process of relying on expectations and not considering alternatives – one has confidence that expectations will not be disappointed. If disappointment occurs then blame is placed externally (on an individual or system) because of the expectation that something different would occur. In this sense one gives agency to the system or individual who may or may not live up to expectations. Choosing to trust in the face of risk and uncertainty and the possibility of negative outcomes, involves retaining individual agency (Luhmann, 1988).

Distrust. Although the focus of the present research is on the construct of trust, a brief overview of the distrust literature is warranted. Distrust is a natural reaction to deceit and disappointment, and a psychological state of distrust may serve a protective social purpose of putting one on alert for possible misleading information especially in situations that are highly ambiguous (Posten & Mussweiler, 2013). Lewicki and colleagues define distrust as “confident negative expectations regarding another’s conduct, signaling a fear of, a propensity to attribute sinister intentions to, and a desire to buffer oneself from the effects of another’s conduct” (Lewicki, McAllister, & Bies, 1998, p. 439). Considerable debate exists in the literature regarding the relationship between trust and distrust. Specifically, early research considered trust and distrust to be dichotomous, along a continuum, and thus accurately measured as opposite ends of the same scale (e.g., Lewicki et al., 1998; Rotter, 1971; Schul, Mayo, & Burnstein, 2008; Tardy 1988; Torkzadeh and Dhillon 2002; Walczuch and Lundgren 2004). More recently, research has explored the notion that trust and distrust are orthogonal and qualitatively different, characterized by different thought patterns and emotions (Dimoka, 2010; Komiak & Benbasat, 2008; Lewicki et al., 1998; Lowry, Wilson, & Haig, 2014; McKnight, Kacmar, & Choudhury, 2004; Moody, Galletta, & Lowry, 2014). In fact research using brain imaging has revealed that trust and distrust activate distinctly different areas of the brain (Dimoka, 2010). Trust and distrust can be present in the same situation concurrently (Luhmann, 1979) – the absence of distrust does not mean the presence of trust. However, despite theoretical suggestions that trust and distrust are determined by different antecedents, there is a dearth of research identifying predictors of distrust with the majority of distrust research linked to marketing, consumer, and information technology research. This makes it difficult to discern whether, and to what extent, distrust might

impact the relationships proposed for study in the current project, thus it was excluded from consideration.

Theoretical paradigms.

Social exchange theories such as leader-member-exchange theory (Dansereau, Graen, & Haga, 1975) assume that trust is founded on the benefits of positive relationship exchanges. In fact, Blau (1964) suggests that social exchange relationships cannot be developed in the absence of trust. As leaders and followers continue to interact and relationship exchanges continue to be positive, leader-follower relationships strengthen and trust builds. However, supervisor-subordinate relationships also serve economic purposes not only as an organizational outcome in terms of production or profit-loss, but also as personal outcomes with respect to managerial behaviours such as monitoring or control over resources within the supervisor-subordinate relationship. These managerial behaviours affect employees' perceptions of trust (Whitener et al., 1998).

Analyses of relationships from this economic perspective often rely on agency theory which is based on the premise that one party enlists another party to perform a specific task, within a given context, in exchange for some compensation (Eisenhardt, 1989). Relationships viewed through the lens of agency theory are examined to determine the mechanisms by which agents protect their own interests – that is minimize risk and vulnerability to maximize benefit (Whitener et al., 1998). While agency theory had generally been applied to the very top levels of firms, Whitener et al. (1998) suggested that regardless of level of ownership, supervisors/managers play a role in the economic exchange as a function of their immediate power over the subordinate with respect to decision making, the delegation of tasks and responsibilities, and the implementation of punishment and reward systems. The cost-benefit

basis of agency theory broadens the understanding of trust formation in the supervisor-subordinate context by highlighting the various factors that contribute to heightened vulnerability and risk in these relationships (Whitener et al., 1998).

However, social identity (Tajfel & Turner, 1979), social categorization (Turner et al., 1987), attribution (Heider, 1958; Weiner, 2010), and social information processing (Salancik & Pfeffer, 1978) theories also provide valuable insights related to understanding trust as an integral part of the sense-making process in organizations. Trusting relationships are constructed through assessments of the individuals in the relationship, the relative level of risk and vulnerability, and the contextual constraints that bind the relationship (Rousseau, Sitkin, Burt, & Camerer, 1998). In this regard, trustors evaluate their environment and make judgements about the intentions and competence of the trustee. Similarly, the trustor evaluates the congruence between the parties on a number of perceived characteristics, including evaluations which lead to the categorization of others as potential ingroup members (Turner et al., 1987). For example, Lewis and Weigert (1985) consider trust as a process whereby individuals make cognitive appraisals of persons and institutions choosing “whom we will trust in which respects and under which circumstances, and we base the choice on what we take to be ‘good reasons,’ constituting evidence of trustworthiness” (p. 970). In this way, the trustor processes all available information, making sense of the situation, including weighing the costs and benefits associated with the immediate interaction, the trustworthiness of the trustee, and the economics of continued (future) relationship building or maintenance. With this understanding it is plausible to assume that trust is the interpersonal mechanism through which a more complete explanation of the development of perceptions of psychological safety may be determined.

Trust in the organizational context

Culbert and McDonough (1986, p. 171) observed that “trust plays an integral role in achieving and sustaining organization effectiveness;” however, they also lamented that in practice it is difficult to “defend the amorphous and idealistic value of trust against the tangible, immediate, and pragmatic value associated with operational efficiency” (p. 172). As such, understanding the mechanisms that support trust within organizations is an important consideration in the management and organizational literature (Dietz & den Hartog, 2006). Trust in organizational contexts includes trust conditions between employees and the organization, and interpersonal trust which includes trust between employees and their leaders and colleagues, groups, or teams. The research described in the subsequent paragraphs demonstrates the importance of the distinction between referents of trust. However, researchers have also called for a more holistic approach to the exploration of trust and the need to understand how the same antecedent may differentially impact trust in multiple referents (Fulmer & Gelfand, 2012; Nedkovski, Guerci, De Battisti, & Siletti, 2017, Thomsen, Karsten, & Oort, 2015).

Trust in the organization. Organizational trust can refer to a number of different constructs; for example, the term has been used to reflect trust within an organization (Mayer et al., 1995), between organizations (interorganizational trust; e.g., Moorman, Zaltman, Deshpande, 1992), or as a reflection of beliefs members have towards their organization and perceptions regarding the degree of support organizations will give to their members (e.g., Culbert & McDonough, 1986). The present research focused on the later perspective as a reflection of beliefs and perceptions members have towards their organization regarding the prevalence of organizational support given to members. In order to facilitate construct clarity and maintain consistency across trust referents, the present study will use the terminology “trust in

organization” to specifically connote a focus on the act of the employee trusting the organization s/he is employed within.

From a sociological and philosophical standpoint, Culbert and McDonough (1986) argued that individuals pursue work orientations that provide opportunities to generate personally meaningful outputs in support of organizational productivity. Thus, they define employees’ trust in organizations as the willingness of individuals to “internalize a view of the system” that orients their decisions and behaviours on the evolving needs of the system and toward the belief that system will recognize and honor these contributions (Culbert & McDonough, 1986, p. 179). Similarly, Shockley-Zalabak, Morreale, and Hackman (2010) define employee trust in the organization as the “overarching belief that an organization in its communication and behaviours is competent, open and honest, concerned, reliable, and worthy of identification with its goals, norms, and values” (p. 12). Both these definitions support the idea that an employee’s trust in his/her organization is related to perceived organizational fit by highlighting the interpretation and subsequent internalization of organizational systems, goals, norms, and values, which then serve to orient behaviour and action that is consistent with the organizational culture.

Numerous organizational conditions impact the development of trust within the organizational context and between organizational members including contracts, legislative and regulatory requirements, organizational policies and practices, and organizational culture (Dietz & den Hartog, 2006). For example, organizational context (inclusive of such features as organizational justice and organizational behaviours, psychological contracts, control mechanisms, and communication) is likely to influence the generation and maintenance of trust within an organization (Bal, De Lange, Jansen, & Van der Velde, 2008; Begley, Lee, & Hui,

2006; Bernardin, Richey, & Castro, 2011; Blunsdon & Reed, 2003; Cohen-Charash & Spector, 2001; Deery, Iverson, & Walsh, 2006; Khazanchi & Masterson, 2011; Li & Cropanzano, 2009; Montes & Irving, 2008; Pučetaitė, Lāmsā, & Novelskaitė, 2010; Restubog, Hornsey, Bordia, & Esposito, 2008; Six & Sorge, 2008; Song, Kim, & Kolb, 2009). Organizational trustworthiness characteristics (i.e., ability, benevolence, and integrity) and organizational identification have been found to play important roles in an individual's willingness to trust an organization (Caldwell & Clapham, 2003; Deery, et al., 2006). Moreover, trust in organization has been found to mediate the relationship between an employee's perceptions of organizational justice and workplace outcomes including job satisfaction, organizational commitment, and turnover intentions (Ayree, Budhwar, & Chen, 2002). If employees have not internalized the goals, values, and assumptions of the organization, or if employee values are incongruent with organizational values and ideals, employee trust in the organization will be in jeopardy. Culbert and McDonough suggest that "trust is the most decisive determinant of the quality of the categories the individual will use to organize his or her position on each issue that comes along" (1986, p. 182); that is, in the organizational context trust is critical for employees to make sense of where and how they fit.

Interpersonal trust.

Dirks and Ferrin (2002) suggest that interpersonal trust is a crucial ingredient in the development of high quality relationships in organizations, and trustful and collaborative organizational behaviours in interpersonal relationships. Likewise, research has established that trust has many positive effects on both individual and team attitudes, workplace behaviours, and well-being (Ashleigh & Higgs, 2012; Colquitt, Scott, & LePine, 2007; Dirks & Ferrin, 2002; Fulmer & Gelfand, 2014; Helliwell, Huang, Putnam, 2009; Helliwell & Wang, 2010; Mayer and

Gavin, 2005). Fulmer and Gelfand's (2014) comprehensive review of trust, across multiple levels and referents, identified numerous consequences of individual trust (or lack of trust) in interpersonal referents including attitudes, knowledge sharing and organizational learning, communication, cooperation and conflicts, commitment and turnover, and performance. Their review supported findings of earlier meta-analytic studies (e.g., Colquitt et al., 2007; Dirks & Ferrin, 2002) while providing a more robust examination of the state of the field via their detailed exploration across levels and referents. Later research has distinguished between vertical and lateral trust in organizations, which is based on the distinction between hierarchical levels associated with the trust referents (Vanhala, Puumalainen, & Blomqvist, 2011). More specifically, vertical trust refers to trust in superiors or leadership, as well as to trust in the organization as a whole; whereas horizontal trust refers to trust in colleagues and peers.

According to Six (2007), the process of interpersonal trust-building is based on two core assumptions: that human behaviour is goal directed and rationality is bounded (that is, goals are varied and many, and not all are given equal weight in a given context); and human behaviour is context dependent, and guided by the normative context within which an individual is embedded. In light of these assumptions one can infer that trust will impact both the context and the outcomes associated with goal seeking in specific domains. In fact, because trust is considered to be such an important element of positive social relationships (Colquitt et al., 2007; Gould-Williams, 2007; Gould-Williams & Davis, 2005; Gren & Uhl-Bien, 1995), in diverse organizational contexts where similarity between colleagues and leaders may be less clear, "the heightened degree of uncertainty and vulnerability associated with interpersonal cooperation makes trust a vital ingredient for cooperation and employee well-being" (Downey, Werff, Thomas, & Plaut, 2015, p.36). Thus, in the organizational context, trust (or lack of trust)

associated with interpersonal referents may impact relationships between fit and feeling accepted, valued, and psychologically safe in the workplace. The present study focused on individual trust in an interpersonal referent: specifically individual trust toward one's leader (manager, supervisor) and coworker(s).

Trust in leader. Trust in leadership is an important consideration for organizational researchers. In particular it is important to understand the mechanisms that influence leader-follower dynamics and how trust in leaders affects organizational outcomes. Perceived leader trustworthiness represents the constellation of perceived leader ability, integrity, and benevolence; perceptions of leader trustworthiness have important implications for successful supervisor-subordinate relations. Many researchers have identified leader trustworthiness as instrumental to building quality leader-follower relationships, as well as for being the necessary components for the development of trusting relationships (see Colquitt et al., 2007; Fulmer & Gelfand, 2014 for reviews). Leadership can be executed at a number of different organizational levels from president or CEO, to direct supervisors. For the purposes of the present study, 'trust in leader' refers to the trust an employee has in his or her direct supervisor or manager.

Through their own behaviour, leaders, as representatives of the organization, can serve as conduits to provide potentially critical information about the trustworthiness of the organization as a whole. Leaders play a significant role in disseminating, cultivating, and reinforcing organizational values, norms, and beliefs (McDonald, Pini, & Bradley, 2007; Thompson, Brough, & Schmidt, 2006). Leaders are responsible for the implementation of policies, practices, and procedures related to organizational processes and the ways that leaders implement these organizational features affects the perceptions of employees with respect to the leader's trustworthiness, integrity, and fairness.

Arguably, leaders play an important role in communicating and modeling the climate and culture of an organization (Shirey, 2009; Woolley, Caza, & Levy, 2011); the climate and culture of an organization exemplifies the structures that are in place which either facilitate or hinder the development of trusting intraorganizational relationships (Six & Sorge, 2008; Song et al., 2009). To illustrate, recent research indicates that trust in leaders mediates the relationship between high commitment human resource management practices and job performance and in-role behaviours (Rubel, Rimi, Yusoff, & Kee, 2018), transformational leadership and employee feedback seeking (Wang, Qian, Ou, Huange, Xu, & Xia, 2016), transformational leadership and job satisfaction (Braun, Peus, Weisweiler, & Frey, 2013), transformational leadership and organizational citizenship behaviours (Sarwar, Mumtaz & Ikram, 2015), and ethical leadership and employee creativity (Javed, Rawwas, Khandai, Shahid, & Tayyeb, 2018).

Extant research provides evidence for relationships between leader behaviours and subordinates' trust (Chughtai, Byrne, & Flood, 2015; Engelbrecht, Heine, & Mahembe, 2015; Lapidot, Kark, & Shamir, 2007; Nienaber, Romeike, Searle, & Schewe, 2015; Shamir & Lapidot, 2003). However, the literature also suggests that relationships between leaders and employees rely to some degree on an implicit social contract "wherein followers trust leaders to make decisions that benefit the group and leaders agree to pursue actions that are in the group's best interest" (Maner & Mead, 2010, p. 482). Moreover, followers are quite likely to enter relationships with superiors with *a priori* expectations for certain levels of benevolence, ability, and integrity (Lapidot et al., 2007). Mayer and colleagues (1995) suggest that a perceived deficit in any one of the characteristics can lead to diminished trust; however, perceptions of the context of the relationship will affect both the need for trust and evaluations of leader trustworthiness (Mayer et al., 1995).

Followers' trust in their leaders carries an inherent element of vulnerability and risk. Thus, the nature of organizational constraints relative to the power dynamics fundamental to the leader-subordinate relationship (including asymmetries in power and perceptions of fairness and justice), factor into how trustworthy leaders appear to be. Perceptions of leader trustworthiness ultimately influence employees' willingness to actively trust their leaders.

Leaders who misuse their power risk decreased respect and diminished trust from employees (Magee & Galinsky, 2008) and excessive use of coercive power and surveillance can foster feelings of distrust by being perceived as a breach of the trust element of the social contract (Subašić, Reynolds, Turner, Veenstra, & Haslam, 2011). Conversely, managers high in political skill (the capacity to read and understand interpersonal and situational contexts; Treadway, Breland, Williams, Cho, Yang, & Ferris, 2013) foster greater employee performance and effectiveness through specific behaviours they use to manage employees, including trustworthy behaviours (Smith, Plowman, Duchon, & Quinn, 2009). Employee perceptions of justice and fair treatment more strongly signify leader trustworthiness and serve to legitimize authority (Hegtvedt, 2009). Moreover, leader-member exchange theory (LMX; Graen & Scandura, 1987; Graen & Uhl-Bien, 1995) has consistently identified trust as a dimension of work relationships and trust in one's supervisor has been shown to be a component of high quality LMX relationships (Ferris, Liden, Munyon, Summers, Basik, & Buckley, 2009; Martinez, Kane, Ferris, & Brooks, 2012).

Building on Whitener and colleagues' (1998) exchange framework of managerial trustworthy behaviour, Seppälä, Lipponen, Pirttilä-Backman, and Lipsanen (2011) suggested that sharing and delegation of control are two important aspects of leader-subordinate trust development. Furthermore, these authors suggested that supervisor trust and risk-taking

behaviours (sharing of control and empowering subordinates) would decrease subordinate dependence. Decreasing subordinate dependence then facilitates increased trust in the leader by signaling an acknowledgement of subordinate competence, capacity, and knowledge (Hauer, ten Cate, Boscardin, Irby, Iobst, & O'Sullivan, 2014), while also increasing leaders' expectations of trust reciprocity and subordinates' felt obligations of reciprocity. These authors found that trust in the context of the supervisor-subordinate relationship was partially mediated by autonomy and sense of power (Seppälä et al., 2011). That is, when subordinates have a sense of control over their work and have confidence in their ability to influence their work group, conditions are more favourable for trust building in work-group and organizational relationships (see also, Mills & Ungson, 2003; Moye & Henkin, 2006; Spence Laschinger, Finegan, & Shamian, 2002; Zhu, May, & Avolio, 2004). Likewise, when employees feel connected to their work and feel that their values and ideals match those of their leaders, they are more likely to engage in organizational processes, more likely to trust their employers, and experience greater psychological health. As a result, it is plausible to infer that employees who perceive greater fit with their leaders and have trust in their leaders, will perceive greater psychological safety in their organizational environment. Research discussed above with respect to the relationship between psychological safety and leadership supports this inference.

Trust in coworker(s). Downey et al. (2015) argue that the literature is clear with respect to the positive relationship between referents of trust and employee well-being (e.g., Liu, Siu, & Shi, 2010; Renee Baptiste, 2008). Researchers have suggested that trust in colleagues facilitates dedication and engagement with work, allowing employees to become absorbed in their work as a result of less need to monitor colleagues or worry about potential unfavourable actions of others (Chughtai & Buckley, 2009; Mayer & Gavin, 2005). Other research refers to *lateral trust*

(i.e., trust between coworkers) and indicates that lateral trust has implications for job satisfaction and employee withdrawal behaviours (Donovan, Drasgow, Munson, 1998), attitudes and positive work behaviours (Ashleigh, Higgs, & Dulewicz, 2012; Dirks & Ferrin, 2002), and cooperative behaviours, personal accomplishment, burnout, and emotional exhaustion (Johnson, Worthington, Gredecki, Wilds-Riley, 2016). The field of education refers to *collegial trust* and researchers examine its role in professional learning communities (organizations; e.g., Gray, Kruse, & Tarter, 2016; 2017). A number of terms have been used across a variety of streams of research to describe trust in those one works with. Recognizing these different terms and streams of research, the common factor is trust in one's coworker; as such, that was the language adopted in the current study.

In the field of education, trust in coworkers has been found to be related to knowledge transfer, climates of learning, job satisfaction, capacity building, social capital, organizational commitment, mentorship, and student learning (Gray et al., 2016; 2017; Li, Hallinger, Kennedy, & Walker, 2016; Thomsen et al., 2015; Van Maele, Moolenaar, & Daly, 2015; Zheng, Yin, Liu, & Ke, 2016). This literature predominantly indicates that trust in coworkers mediates the relationship between organizational conditions which relate to, and facilitate the development and maintenance of, the various components of professional learning communities including cooperative norms, participative decision-making, and group cohesion.

Trust research clearly establishes the importance of trust in the development of trustful and collaborative relationships in the organizational context. Furthermore, to reiterate Six' (2007) argument, trust impacts both the context and the outcomes associated with goal seeking and is thus a vital ingredient for cooperation and employee well-being (Downey et al., 2015). Limited research has also identified trust and high quality interpersonal relationships as

precursors to psychological safety (e.g., Edmondson & Kramer, 2004; Carmeli et al., 2009).

However less research is available with respect to exploring the relationship between person-environment fit and trust in coworkers, and how trust may impact the relationship between person-environment fit and perceptions of psychological safety. Given the importance of trust in organizational contexts and interpersonal relationships, and support for the role of trust in the development of psychological safety this is a notable gap.

Trust research summary.

A considerable body of research has linked trust to numerous positive organizational and individual outcomes as noted above. However, there is also a growing body of research that has identified links between trust in organizational referents (e.g., organization, leaders, coworkers) and psychological safety (e.g., Carmeli & Zisu, 2009; Frazier et al., 2017; Madjar & Ortiz-Walters, 2009; Zhang, Fang, Wei, & Chen, 2010). For example, some leader-subordinate relationships may be based on personal, affective aspects, including mutual respect, influence and trust; others may be founded according to formal role relationships (Dansereau et al., 1975). Leader-follower relationships and leadership styles can either mitigate or exacerbate feelings of job stress or strain (Erkutlu & Chafra, 2015; 2016; Frazier, et al., 2017). The quality of interpersonal relationships will affect trust in organizational referents, satisfaction with the job and feelings of security and comfort in the workplace. Quality of interpersonal relationships with peers have been linked with psychological safety, including support from team members (Schepers, de Jong, Wetzels, & de Ruyter, 2008), team caring (Bstieler & Hemmert, 2010), and trust in team members (Zhang et al., 2010), organizational support (Tucker, 2007) and trust in the organization (Carmeli & Zisu, 2009).

Trust is an important component of high quality organizational relationships. Employees experience higher perceived fit in organizational contexts when they perceive congruence with organizational, leader, and coworker values and ideals. Social identity theory suggests that the more employees have internalized the values and ideals of the organization, the greater the match between employees' values and those of their organizations. This implies a greater likelihood that employees will identify strongly with those in their organizational contexts resulting in a greater alignment of fit. The stronger the fit, the greater the opportunity for trust to occur in organizational environments.

Trust has been found to facilitate the development of psychological safety and has been shown to be related to high quality organizational relationships. However, research examining the relationship between perceptions of person-environment fit, trust, and perceived psychological safety is absent, to the detriment of each of the literatures consulted. Likewise, accessible research exploring the relationship of psychological safety to distrust in organizational referents is grossly lacking rendering it difficult to develop theoretically supported propositions regarding the nature of distrust in the context of this organizational research. Psychological safety is most commonly associated with organizational learning and change outcomes (Edmondson & Lei, 2014; Frazier et al., 2017); however, significantly less research is available to discern how employees come to perceive their contexts as safe enough to learn from their mistakes, challenge the status quo, adapt to organizational change, and contribute to organizational learning. Bridging this gap has the potential to provide organizations with the competitive advantage necessary to harness diversity and create institutions which view change as growth and mistakes as learning opportunities.

The literature supports that trust is an important mediating mechanism through which psychological safety may be enhanced. In fact, it may be that trust is the interpersonal mechanism through which a deeper understanding of the development of individual perceptions of psychological safety can be developed. This proposition rests largely on the assumption that perceptions of fit with one's organizational environment will foster the conditions necessary for high-quality interpersonal relationships which are founded on trust. Having trust in organizational referents should provide confidence in the safety of a given situation and foster perceptions that organizational members will react positively, or at least constructively, toward interpersonal risk taking in the workplace. Exploring perceptions of psychological safety as the outcome and trust as a mechanism through which this can be developed adds to the field's understanding of what must occur in order for psychological safety to be ingrained in organizational policy and practice. Considering the shared outcomes of trust and psychological safety and the general trend in organizational practice to recruit and select based on fit, it is puzzling that organizational research has not yet explored these relationships. And, as noted earlier, the need for organizations to capitalize on increasingly diverse workforces while protecting employee psychological safety and promoting organizational efficiency and positive outcomes are important practical implications which should be the drivers for such research.

Despite the conceptual overlap between trust and psychological safety, there is no empirical support for the notion that perceptions of psychological safety would increase trust. Although plausible, it is assumed much less likely given the fact that feeling comfortable to express oneself without fear of reprisal would not necessarily impact the degree of trust that the trustor would place on organizational referents. Psychological safety is the cognitive appraisal of the situation and judgement regarding the extent to which organizational members will be

accepting of interpersonal risk-taking. It is anticipated that one would need to have trust in the organizational members or referents based on assumptions regarding their actions in a given situation before one could have confidence in those actions and therefore be able to make accurate judgements regarding the degree of psychological safety associated with a specific context or situation (Luhmann, 1988).

The Present Study

The preceding review of the literature illuminates the need to more comprehensively and holistically examine the underlying direct and indirect mechanisms through which trust mediates the association between perceived person-environment fit and psychological safety in the workplace within varying levels of an organization (coworker, leader, organizational). Perceived similarity in terms of age, gender, and ethnicity were also examined as potential antecedents of this mediational process. The present study thus aimed to test an integrative, theoretically-driven path model mapping the associations among perceived similarity, fit, trust, and psychological safety. It was expected that the greater the perceived similarity, in terms of age, gender, and ethnicity, the more likely individuals are to experience higher perceived person-environment fit. Higher perceptions of fit, then, were expected to lead to higher perceptions of trust which, in turn, lead to higher perceptions of psychological safety. These associations were expected to be consistent for all three referents. A visual representation of the hypothesized structural relationships between the variables can be found in Figure 1.

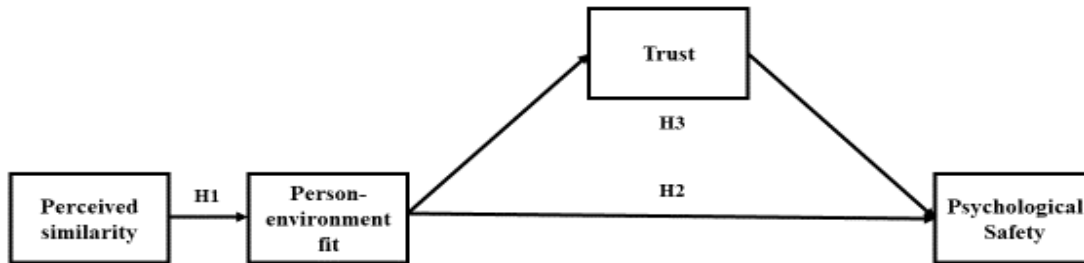


Figure 1. Conceptual model of the hypothesized structural relationships between similarity, fit, trust, and psychological safety.

The results of this research have the potential to prompt change in organizational policy and practices by providing greater clarity of the mechanisms through which employees come to perceive they are safe to express their views in the workplace. Little research has explored psychological safety as an outcome in its own right. The present research identified the need to understand this important construct as an outcome and provide insight into possible antecedents of it, thus expanding its nomological net. Psychological safety has been found to relate to a number of important organizational outcomes; however, unless organizational researchers understand the conditions necessary for psychological safety to develop they will be less able to provide organizations with adequate advice regarding how best to create environments that foster a sense of psychological safety. If organizations are not fully aware of how best to foster these perceptions, they risk employees feeling unsafe in the workplace creating the potential for a host of negative individual and organizational level outcomes. Given the increasing recognition of the

importance of psychological safety at work, as evidenced by the development of The Canadian National Standard, understanding mechanisms which facilitate employee perceptions of psychological safety is an important organizational and social concern.

The current project sought to understand the mechanisms through which employees come to perceive that they are psychologically safe in their workplace. The literature supports the argument that it is important to understand how employees perceive they fit within their organizational contexts and whether or not they have trust in organizational referents. These perceptions are necessary in order for employees to ultimately judge whether or not they feel psychologically safe at work.

While numerous arguments have been proposed on the limitations with respect to self-report data and common-method biases in social science research, this author sides with other research that dually suggests the importance of understanding subjective realities and laments the paucity of scientific investigation focused on understanding perceptions of context (Hogan, 2009; Argyle, Furnham, & Graham, 1981; Bond, 2013; Funder, 2006, 2008, 2009; Hogan, 2009; Kenny, Mohr, & Levesque, 2001; Magnusson, 1981; Rauthmann, Sherman, & Funder, 2015a,b; Reis, 2008; Ross & Nisbett, 1991; Rozin, 2001; Swann & Seyle, 2005).).

To address the gaps identified above, the following hypotheses were advanced:

H₁: Perceived demographic similarity (age, gender, ethnicity) will predict perceived person-environment fit; specifically:

1a. Perceived demographic similarity (age, gender, ethnicity) will predict person-organization fit.

1b. Perceived demographic similarity (age, gender, ethnicity) will predict person-leader fit.

1c. Perceived demographic similarity (age, gender, ethnicity) will predict person-coworker fit.

H₂: Perceptions of person-environment fit (with organization, colleague/group, and leader referents) will predict employee perceptions of psychological safety; specifically:

2a. Perceived person-organization fit will predict employee perceptions of psychological safety

2b. Perceived person-leader fit will predict employee perceptions of psychological safety.

2c. Perceived person-coworker fit will predict employee perceptions of psychological safety.

H₃: Trust (in organization, coworker, and leader) will mediate the relationship between person-environment fit and psychological safety; specifically:

3a. Trust in the organization will mediate the relationship between person-organization fit and psychological safety.

3b. Trust in one's leader will mediate the relationship between person-leader fit and psychological safety.

3c. Trust in one's coworkers will mediate the relationship between person-coworker fit and psychological safety.

CHAPTER 3: Methods**Participants**

Power was first assessed for model fit using an R based estimate of RMSEA model fit via a program developed by Preacher and Coffman (2006). Using an alpha of .05, 8 degrees of freedom, a target RMSEA of .05, a null RMSEA of .08, and a desired power level of .80 which is set by convention in the social sciences, a sample size of 382 was deemed to be a sufficient sample size to test the proposed structural model. The degrees of freedom are calculated using the formula $[p(p+1)/2]-q$, where p is the number of measured variables and q is the number of parameter estimates.

Participants were recruited using an online questionnaire distributed through Amazon Mechanical Turk (AMT). AMT is a crowdsourcing platform which facilitates the hiring of individuals for online jobs called Human Intelligence Tasks (HITs, i.e., the questionnaire), in exchange for small financial compensation. The researcher created a “requester” account with AMT through their online self-service interface. A requester is an individual or group who posts a survey and requests participants complete the survey in exchange for a small stipend. The requester decides in advance the number of participants required and pre-pays for the HITs plus and administration fee to AMT. In this research, based on the length of the survey, participants were paid \$0.50 USD for approximately five to seven minutes of work.

Once the account was established the researcher uploaded the survey description which included the survey link which would direct participants to an external server hosted by Qualtrics – no survey data were stored on the AMT site. Participants were targeted using pre-screening criteria that enabled only those over the age of 18, those who lived in the United States, were fluent in English, and those who had an AMT approval rating of 90% or higher, to see the

recruitment advertisement. Approval ratings are used by AMT to ensure HITs are completed by workers that have demonstrated their ability to give high quality responses. The study advertisement can be found in Appendix (A).

A total of 874 participants were recruited from AMT; 47 cases were removed due to failed accuracy checks (i.e., invalid responses on accuracy check questions), with 827 usable cases remaining after data cleaning. Participants who provided invalid responses to either or both accuracy check questions were found to also complete the survey in less than half of the time estimated for completion (i.e., less than 2.5 minutes) with the majority of these respondents completing the survey in under one minute (for excluded participants completion rates ranged from 32 secs to two minutes and 16 seconds). The remaining cases constituted 371 women and 444 men, 3 non-binary persons, and 9 participants who did not respond to the gender identity question. Sixty eight percent of participants identified as Caucasian and more than half of all respondents were in the 26-40 year old age bracket.

Frequency tables (see Tables 3-8) are provided below based on responses to demographic questions regarding gender, age, ethnicity, tenure, employment role, and employment status.

Table 3

Frequency Table: Gender

Gender	<i>N</i>	%	Cumulative %
Non-binary	3	.4	.4
Female	371	44.9	45.3
Male	444	53.7	99
Prefer not to answer	2	.2	99.2
Missing	7	.8	100

Table 4

Frequency Table: Age

Age	<i>N</i>	%	<i>Cumulative %</i>
18-25	157	19	19
26-40	480	58.1	77
41-55	144	17.4	94.5
56-65	40	4.8	99.3
66+	5	.6	99.9
Missing	1	.1	100

Table 5

Frequency Table: Ethnicity

Ethnicity	<i>N</i>	%
Asian	152	18.4
Black/African American	72	8.7
Caucasian	562	68
European	50	6
First Nations, Métis, Inuit, American Indian	18	2.2
Middle Eastern	7	.8
East Asian	8	1
West Indian	4	.5
Other	17	2.1

Note: Participants were permitted to choose more than one response for this question; therefore the total percentage is greater than 100.

Table 6

Frequency Table: Tenure

Tenure	<i>N</i>	%	<i>Cumulative %</i>
Less than 12 months	85	10.3	10.3
1-5 years	407	49.2	59.5
5-10 years	211	25.5	85.0
10-15 years	73	8.8	93.8
15-20 years	30	3.6	97.5
20-25 years	13	1.6	99.1
25-30 years	5	.6	99.7
30-35 years	2	.2	99.9
35+ years	1	.1	100

Table 7

Frequency Table: Employment Role

Employment Role	<i>N</i>	%	<i>Cumulative %</i>
Frontline/Office	198	23.9	23.9
Administrative support	208	25.2	49.1
Manager/Supervisor	297	35.9	85
Director	23	2.8	87.8
Senior management	20	2.4	90.2

Other	81	9.8	100
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Table 8

Frequency Table: Employment Status

Employment Status	<i>N</i>	%	Cumulative %
Part-time	199	14.4	14.4
Full-time	666	80.5	94.9
Contract employee/student/Intern	36	4.4	99.3
Missing	6	.7	100

Procedure

Once AMT workers read the study advertisement they had the option to click a link to the survey link which directed them to a Letter of Information (see Appendix B) explaining the study purpose, potential benefits and study instructions, estimated time to complete the survey, any foreseeable risks, participant rights, and researcher responsibilities. Contact information for the primary researcher was provided in the Letter of Information so that participants could contact the researcher if they had any additional questions or concerns about the study. Participants were assured of their anonymity as no identifying information was collected. Participants entered their AMT worker ID to facilitate compensation; however, these identification numbers were not associated with personal or identifying information. Participant names or emails would only become known to the research if participants emailed the researcher directly with questions; however, this information was not associated with specific data and as such the data remained anonymous.

At the end of the Letter of Information participants indicated their consent to participate in the research by clicking “I consent to participate in this research.” at which point they were directed to the survey. If participants indicated “I do not consent to participate in this research.”

they were directed to a termination page and instructed to close their browser. The survey included 29 items, and was estimated to take approximately five to seven minutes to complete.

Declining consent redirected participants to a *Thank you* page, away from the survey. Upon completion of the survey, participants were thanked for their time and directed to a Summary Letter (see Appendix C) which provided a synopsis of the study purpose and goals, as well as participant compensation information.

Measures

Participants completed the following measures in the order they are listed below. Each survey assessment can be found in Appendix D.

Demographics. Age, gender, ethnicity, organizational role, and perceived demographic similarity. Participants completed a demographics inventory which included questions about gender, age, ethnicity, tenure, current role, employment status and perceived demographic similarity. Following the example of Schaffer and Riordan (2013) perceived demographic similarity was assessed from self-report assessments of their own and coworkers/leaders age, race, and gender. The demographics inventory included nine items asking participants to rate how similar they perceived themselves to be to their organization as a whole in terms of average age, average gender, and average ethnicity; how similar they perceived themselves to be to their leader in terms of age, gender, and ethnicity, and how similar they perceived themselves to be to their coworkers in terms of age, gender, and ethnicity. Participants rated these items on 5-point Likert scale ranging from 1(*very dissimilar*) to 5(*the same*).

Person-organization fit. Person-organization fit was measured using a three-item subscale of a larger measure developed by Cable and DeRue (2002) which was used to assess person-organization fit, needs-supply fit, and demands-abilities fit. Participants responded to

each of the three items on a 5-point Likert scale ranging from 1(*strongly disagree*) to 5(*strongly agree*). Numerous studies examining person-organization fit have implemented the short measure which demonstrates good internal consistency: Cronbach's $\alpha = .82$ (2 items, Caldwell, Herold, & Fedor, 2004); .91-.92 (Cable & DeRue, 2002). A sample item from the person-organization fit scale is: *The things that I value in life are very similar to the things that my organization values*. Cronbach's $\alpha = .88$ in the present study (see Appendix D).

Person-leader fit. Hoffman, Bynum, Piccolo, & Sutton (2011) adapted Cable and DeRue's (2002) short measure to assess person-leader fit. The adapted scale showed adequate reliability in their study (Cronbach's $\alpha = .67$). Hoffman and colleagues' measure used the same three items, however changed the referent from organization to leader. Participants responded to each of the three items on a 5-point Likert scale ranging from 1(*strongly disagree*) to 5(*strongly agree*). A sample item from this scale is: *My personal values match my leader's values and beliefs*. In the present study Cronbach's $\alpha = .90$.

Person-coworker fit. Following Hoffman and colleague's lead, this study adapted Cable and DeRue's (2002) measure by changing the referent to 'coworker' in order to obtain employees' perceptions of their fit with those with whom they work closely. Participants responded to each of the three items on a 5-point Likert scale ranging from 1(*strongly disagree*) to 5(*strongly agree*). Cronbach's $\alpha = .88$ for person-coworker fit in this study. A sample item from this scale is: *My coworkers' values and beliefs provide a good fit with the things that I value in life*.

Trust in organization, leader, and coworker. In the context of the current research, trust was operationalized as a global assessment and presumed to be influenced by cognitive appraisal of the trust referent. That is, trust was operationalized as a conscious decision to trust or

not trust, based on an interpretation of the context including an analysis of risk, vulnerability, and degree of uncertainty that future interactions pose with a given referent. The present research did not propose to measure components of trust or understand the mechanisms through which trust emerges or develops in the context of organizational referents. This research sought to measure perceptions of trust in their simplest form – as perceptions or beliefs regarding the extent to which participants agree or disagree they have trust in target organizational referents. Each single item measure was designed to capture respondents' attributional judgements regarding their perceived trust in their organization, leader and coworkers. Following the example set by Searle and colleagues (2011), trust was measured using a single item scale for each referent: *I trust my organization; I trust my leader; and I trust my coworkers*. Participants responded to each of the items on a 5-point Likert scale ranging from 1(*strongly disagree*) to 5(*strongly agree*).

Psychological safety. Psychological safety was assessed using items adapted from Edmondson (1999b). Frazier and colleagues' (2017) meta-analysis and Newman and colleagues' (2017) systematic review both indicate that the overwhelming majority of the literature uses this team level construct at the individual-level of analysis, changing the "on this/in this team" referent to "of this/in this organization" (e.g., Carmeli, 2007 – full scale; Carmeli et al., 2009 – five items; Carmeli & Gittell, 2009 – full scale; Kark & Carmeli, 2009 – six items). This measure demonstrates good internal consistency; Cronbach's α range from .70 - .82. Detert and Burris (2007; three items) also used an adapted version of this measure: Cronbach's $\alpha = .90$. Participants responded to the full seven item scale on a 7-point Likert scale from "*very inaccurate*" to "*very accurate*." In the current study items were framed using the "of this/in this organization" referent. Sample items from the psychological safety scale include: *People in this organization sometimes reject others for being different* (reverse coded) and *It is safe to take a*

risk in this organization. In the present research Cronbach's α is consistent with previous studies: $\alpha = .77$.

Tenure. As part of the general demographic questions, participants were asked to indicate how long they had been employed at their current organization; response choices were: Less than 12 months; 1-5 years, 5-10 years, 10-15 years, 15-20 years, 20-25 years, 25-30 years, 30-35 years, 35+ years. Research suggests that over time as individuals become more familiar with each other, deep-level diversity characteristics, such as attitudes, values, and personality begin to supersede in importance as compared to surface-level characteristics (Cable & Judge, 1996; Elfenbein & O'Reilly III, 2007; Harrison et al., 2002; Ostroff & Rothausen, 1997; Polzer, Milton, & Swann, 2002). To put it simply, the longer individuals work together, work with the same leader, or work within the same organization, the greater the likelihood that individuals may come to see themselves as more similar to others within their employment contexts.

The research also indicates that the positive or negative effects of diversity may be mitigated by time as individuals come to recognize they share similar deeper-level characteristics (Elfenbein & O'Reilly III, 2007; Flynn et al., 2001; Spataro, 2002). Therefore, since tenure may impact perceptions of fit in the context of interpersonal relationships in the workplace, tenure was included as a control variable.

CHAPTER 4: Analysis and Results

Data Screening and Cleaning.

Prior to conducting a test of the proposed structural model, preliminary analyses were conducted using SPSS, version 25.0. The data set was first assessed for invalid responses. Data were also screened for missing responses. When systematic, missing values bias conclusions based on statistical findings. Three types of missing data patterns can occur: *Missing Completely at Random (MCAR)* where loss of data is unsystematic, *Missing at Random (MAR)* where loss is measured and predictable; or *Missing Not at Random (MNAR)* where data are missing systematically (Kline, 2016). Kline (2016) suggests that if less than 5% of the data are missing, the data are assumed to be MCAR. In the present study, across all cases and variables, there were only 53 missing values which constituted less than 1% percent of the data. Little's MCAR test was also not significant ($\chi^2(664) = 679.291, p = .332$) indicating that data satisfied the criteria of MCAR. In order to preserve the number of cases retained, expectation maximization (EM) was used to estimate the missing values (Dempster, Laird, & Rubin, 1977).

Assumptions. Normality of the sample distribution may be impacted by the presence of extreme data points. Skew and kurtosis values were inspected for each variable using conservative cut offs of +/-2 and +/-3 for skew and kurtosis respectively (Field, 2009). No values were outside of this range (see Table 9). Kline (2016) also recommends visually inspecting distribution plots in order to determine normality when sample sizes are large. A visual examination of the histograms for each variable indicated that the variables were approximately normally distributed. Multivariate outliers were identified using Mahalanobis Distance with conservative criteria of $p < .001$ ($\chi^2(9) = 27.88$) for large sample sizes (Kline, 2016). Using these criteria, 80 cases were identified as multivariate outliers. Of 80 possible multivariate outliers,

none were considered influential points falling well below the Cooks distance cut-off with the highest value being 0.03.

Independence of observations assumes that the data from each participant are independent and unrelated to the data of other participants. Random sampling is one accepted means of achieving independence of observations; however, there is no way to accurately ensure complete independence. For the present research, data was collected online through a data collection platform and participants appear to be randomly sampled across the United States. While there is a small possibility that participants completed the survey at the same time, sharing their responses, all participants had the option of completing the survey on their own and the impact of a small number of participants who knew each other would likely be cancelled out as result of individual variability. As such, the assumption of independence of observations may be assumed to have been met.

Multicollinearity occurs when independent variables are highly correlated with each other. If independent variables are highly correlated there is increased possibility that they are measuring the same construct. Field (2009) recommends that independent variable correlations should not exceed 0.80 (see Table 11). VIF and Tolerance statistics were also examined. None of the values exceeded the cut-off scores ($VIF > 10$; $Tolerance < .01$), with VIF and Tolerance values ranging from 1.28 - 2.34 and .43 - .78 respectively. Therefore, the assumption of multicollinearity was not violated.

Finally, relationships between independent and dependent variables are assumed to be linear. Possible curvilinear relationships were ruled out via visual examination of scatterplots. If residual variance is constant across different levels of the predictor variables, then the

assumption of homoscedasticity is met. This was determined by inspecting residual plots.

Linearity and homoscedasticity were confirmed.

Table 9

Skewness and Kurtosis of Univariate Distributions

Variable	Skewness	SE Skewness	Kurtosis	SE Kurtosis
Organization-Age similarity	-0.75	.09	-0.61	.17
Organization-Gender similarity	-0.91	.09	.19	.17
Organization-Ethnicity similarity	-0.77	.09	-0.27	.17
Leader-Age similarity	-0.33	.09	-1.18	.17
Leader-Gender similarity	-0.61	.09	-1.08	.17
Leader-Ethnicity similarity	-0.89	.09	-0.37	.17
Coworker-Age similarity	-0.69	.09	-0.66	.17
Coworker-Gender similarity	-0.85	.09	0.01	.17
Coworker-Ethnicity similarity	-0.79	.09	-0.25	.17
Person-Organization Fit	.71	.09	.04	.17
Person-Leader Fit	.60	.09	-0.20	.17
Person-Coworker Fit	.54	.09	-0.15	.17
Trust in Organization	.94	.09	..62	.17
Leader Trust	.89	.09	.33	.17
Coworker Trust	.87	.09	.67	.17
Psychological Safety	-0.08	.09	-0.02	.17

Descriptive Statistics

Descriptive statistics and bivariate correlations for all study variables are presented in Tables 10 and 11. The present sample on average scored above the mid-point of the rating scale on all relational demography variables, considering themselves quite similar to their organizations, leaders, and coworkers in terms of age, gender, and ethnicity (items were scored low to high similarity). On average, this sample scored above the mid-point of the rating scale on each of the fit variables suggesting that participants perceived positive fit with their organizations, leaders, and coworkers. Similarly, trust scores for each of the three referents (organization, leader, and coworkers) averaged above the midpoint of the rating scale suggesting higher levels of perceived trust.

Table 10

Descriptive Statistics of Study Variables

Variable	Range	<i>M</i>	<i>SD</i>
Organization-Age similarity	1-5	3.37	1.07
Organization-Gender similarity	1-5	3.75	1.06
Organization-Ethnicity similarity	1-5	3.63	1.14
Leader-Age similarity	1-5	3.14	1.25
Leader-Gender similarity	1-5	3.57	1.46
Leader-Ethnicity similarity	1-5	3.77	1.30
Coworker-Age similarity	1-5	3.40	1.07
Coworker-Gender similarity	1-5	3.70	1.07
Coworker-Ethnicity similarity	1-5	3.63	1.14
Person-Organization Fit	1-5	3.60	0.91
Person-Leader Fit	1-5	3.53	0.95
Person-Coworker Fit	1-5	3.58	0.86
Trust in Organization	1-5	3.79	0.96
Leader Trust	1-5	3.88	0.99
Coworker Trust	1-5	3.84	0.92
Psychological Safety	1-7	4.68	1.08

Table 11
Bivariate Correlations of Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Organization-Age similarity		.26**	.21**	.39**	.18**	.17**	.61**	.22**	.17**	.13**	.11**	.11**	.13**	.18**	.14**	.07*
2. Organization-Gender similarity			.21**	.16**	.48**	.19**	.26**	.63**	.16**	.03	.10**	.10**	.07*	.12**	.10	.05
3. Organization-Ethnicity similarity				.21**	.14**	.65**	.16**	.15**	.69**	.06	.05	.14**	.09*	.09**	.11**	.06
4. Leader-Age similarity					.18**	.19**	.35**	.17**	.18**	.06	.09**	.07	.11**	.18**	.10	.02
5. Leader-Gender similarity						.20**	.18**	.46**	.11**	.03	.08*	.07*	.06	.08*	.06	.05
6. Leader-Ethnicity similarity							.14**	.11**	.61**	.05	.10**	.11**	.06	.10**	.06	.07*
7. Coworker-Age similarity								.30**	.20**	.06	.10**	.12**	.13**	.17**	.17**	.08*
8. Coworker-Gender similarity									.17**	-.02	.01	.04	.06	.08*	.08*	-.01
9. Coworker-Ethnicity similarity										.03	.06	.14**	.07**	.09*	.12**	.03
10. Trust in Organization											.59**	.48**	.60**	.49**	.37**	.47**
11. Leader Trust												.48**	.49**	.60**	.34**	.43**
12. Coworker Trust													.39**	.40**	.51**	.39**
13. Person-Organization Fit														.74**	.56**	.41**
14. Person-Leader Fit															.57**	.39**
15. Person-Coworker Fit																.33**
16. Psychological Safety																

** $p < .01$; * $p < .05$

Examination of the correlation matrix suggests that the relational demography variables are all slightly positively correlated with each other. Trust and fit were also significantly correlated, with the exception of the correlation between perceived similarity to coworker gender and trust in organization, which was negative, but nonsignificant. It is important to note, however, that because this study is statistically overpowered, the effect sizes (i.e., square of the correlations) are more meaningful for interpretation than the significance values. Moreover, the shared variance among these overlapping ratings may stem from a common reporter bias, which can occur when respondents rate the same construct (e.g., trust) for multiple sources or referents (e.g., coworker, leader, organization; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Spector, 2006). This model was thus specified as three separate path models rather than one global model to reduce model complexity and to remove potential sources of overlapping variance due to the potential for common reporter bias.

Path Analysis

Path analysis was used to assess the simultaneous relationships between individual level perceptions of person-organization fit and trust, to employees' perceptions of psychological safety in the workplace. Path models are useful for testing both direct and indirect effects in a theoretical model that implies a temporal order of associations, while exerting strict control over Type I error (Kline, 2016). Path models also imply that certain covariances (or correlations) among constructs should be observed if the model is correctly specified (Kline, 2016). The observed covariances from the data can then be compared with the implied covariances to test the goodness of fit of the hypothesized model using several established metrics that are discussed below. Kline (2016) cautions against inferences of causation, however, arguing it is not possible to demonstrate causation with cross-sectional data.

The conceptual model (Figure 1) was tested using path analysis and conducted using Mplus v.8.2 (Muthén & Muthén, 2008). In order to determine whether the data adequately fit the proposed theoretical model, a number of fit indices were examined including Chi-square (χ^2 ; Bollen, 1989), Tucker-Lewis Index (TLI; Tucker & Lewis, 1973), comparative fit index (CFI; Bentler, 1990), the root mean square error of approximation (RMSEA; Steiger & Lind, 1980), and the standardized root mean square residual (SRMR; Kline, 2016). In general, researchers indicate the use of multiple fit indices to help assess model fit as all fit indices have shortcomings and no single index is considered superior to others in all cases (Byrne, 2001; Kline, 2016). Fit criteria followed recommendations by Kline (2015), Jackson, Gillaspay Jr., and Purc-Stephenson (2009) and McDonald and Ho (2002).

Chi-square is a test to determine the goodness-of-fit of the identified model to the predicted model. A χ^2 that is as close to zero as possible indicates good model fit with zero indicative of a perfect fit (Kline, 2016). Since perfect fit is generally unlikely, it is not prudent to rely on the χ^2 statistic alone as a good indicator of model (un)fit. The TLI is a relative fit index that is computed on the ratios of the model and null model chi square. The TLI statistic yields values ranging from zero to 1.00, with values close to .95 indicative of good fit. Bentler (1990) proposed the CFI, which compares the hypothesized model with an independence model taking sample size into account. Values for the CFI range from zero to 1.00, with a cutoff value close to .95 being indicative of appropriate model fit (Hu & Bentler, 1999). RMSEA measures closeness of fit with values closer to zero indicating best fit and values closer to one suggesting poor fit. Hu and Bentler (1999) originally proposed that the cutoff value for RMSEA be .06 with a 90% confidence interval; however, it has been noted that in small samples RMSEA tends to over-reject models (Byrne, 2001). A threshold of .08 is currently reported as appropriate (Hooper,

Coughlan, & Mullen, 2008). Finally, SRMR assessed the differences between observed and predicted covariances which should ideally be close to zero for acceptable model fit (Kline, 2016). Hu and Bentler (1999) recommend a threshold of less than .08 for acceptable fit.

Indirect effects were calculated using Mplus v.8.2 (Muthén & Muthén, 2008). Standard errors for the indirect effects were estimated with a bootstrapping procedure using 1000 bootstrapped samples (Little, Card, Bovaird, Preacher, & Crandall, 2007). As a measure of significance, this statistical analysis yields a *t*-value which corresponds to the ratio of the indirect effect coefficient to its corresponding standard error. In large samples a ratio > 1.96 is significant at the .05 level.

Path analysis: Testing the proposed structural model.

Three path models using maximum likelihood (ML) estimation were tested to evaluate the proposed associations between the relational demography variables, fit, trust, and psychological safety for each of the three referents (organization, leader, coworker). That is, the organization model tested the relationships between perceived demographic similarity with the organization, organization fit, trust in the organization, and psychological safety, for example. Furthermore, it should be noted that within this literature, data collected on leaders, coworkers, and organizations are traditionally considered to be nested. Participants are often nested within groups (i.e., coworkers), groups are nested within leaders, and leaders are nested within organizations. In this study, however, because individuals are reporting on their perceptions of each domain, the unit of analysis is constant at the participant level, and thus hierarchical nesting of the data is not a concern and did not require multi-level modeling to test the proposed associations.

The results of the path analysis indicated that the model showed excellent fit to the data for each of the three referents. Models are visually depicted in Figures 2-4; model fit statistics are reported in Table 12 below. Preliminary analyses revealed that, for this sample, job tenure was minimally correlated with two exogenous variables, but these correlations, though significant, were of negligible effect size. Therefore, job tenure was removed as a covariate for all analyses presented below.

Table 12

Model Fit Statistics for Each Model

Model	$\chi^2(8)$	<i>p</i>	RMSEA	90% CI lower, upper	CFI	TFI	SRMR
Organization	13.05	.11	.028	.000; .054	.992	.985	.017
Leader	13.22	.10	.028	.000; .054	.991	.983	.018
Coworker	15.94	.04	.035	.006; .059	.982	.966	.021

For Hypothesis 1, perceived demographic similarity was expected to predict person-environment fit, was partially supported. With respect to coworkers, age and ethnicity significantly predicted fit, accounting for 3.7% of the variance in coworker fit (see Table 15). For both organizational referent and the leader referent, only perceived similarity to average age of those in the organization and perceived similarity with leader age predicted leader fit accounting for 2.2% and 3.6% of the variance in fit respectively (see Tables 13 and 14 respectively). The implications of these findings will be discussed in detail below.

For each referent, perceptions of fit significantly predicted perceived psychological safety as indicated by the direct effects specified between fit and safety in each model (all $p < .001$) providing full support for Hypothesis 2 (Figures 2-4; organization fit, $\beta = .205$; leader fit, $\beta = .219$; coworker fit, $\beta = .180$). See Tables 13-15 for the standardized model results for each organizational layer. The models also accounted for a significant percentage of variance in the endogenous variables. For the organization model, 35.6% of the variance in trust in the

organization is accounted for by organization fit; and, 24.6% of the variance in psychological safety is accounted for by organization fit and trust in the organization (see Table 13). Likewise, for the leader model, 35% of the variance in trust is accounted for by leader fit and 21.1% of the variance in psychological safety is accounted for by leader trust and leader fit (see Table 14). Finally, 25.5% of the variance of trust in coworker is accounted for by coworker fit and 17.4% of the variance in psychological safety can be accounted for by coworker trust and coworker fit in the coworker model (see Table 15).

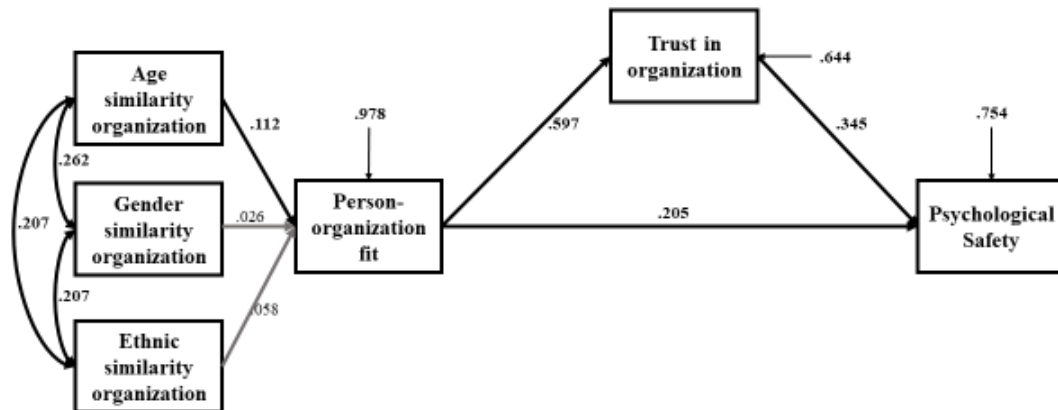


Figure 2. Path model for Organization variables.

Note: All coefficients reported in the model are standardized; lighter paths are non-significant

Table 13

Standardized Coefficients and Organizational Model Summary

	Predictor	β	SE	t	p	95% CI		R^2	SE	t	p
						Lower	Upper				
PO	Age	.112	.039	2.854	.004	.037	.188	.022	.011	1.929	.054
	Gender	.026	.037	.695	.487	-.048	.100				
	Ethnicity	.058	.036	1.606	.108	-.015	.131				
PO	TO	.597	.030	19.987	.000	.537	.653	.356	.035	10.032	.000
PS	TO	.345	.037	9.344	.000	.272	.420	.246	.028	8.858	.000
	PO	.205	.040	5.074	.000	.125	.283				

Note: PO = person-organization fit, TO = trust in organization, PS = psychological safety

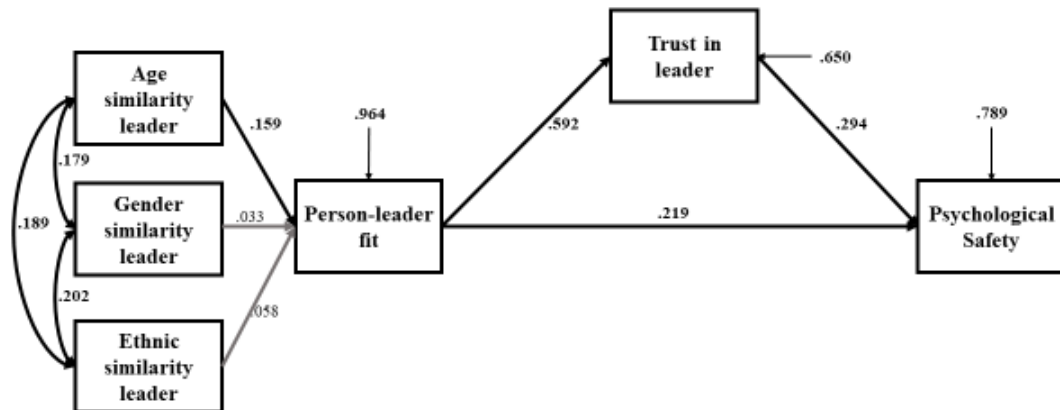


Figure 3. Path model for Leader variables.

Note: All coefficients reported in the model are standardized; lighter paths are non-significant.

Table 14

Standardized Coefficients and Leader Model Summary

Predictor	β	SE	t	p	95% CI		R^2	SE	t	p
					Lower	Upper				
PL Age	.159	.037	4.270	.000	.090	.236	.036	.014	2.540	.011
PL Gender	.033	.037	.898	.369	-.034	.109				
PL Ethnicity	.058	.037	1.548	.122	-.020	.126				
PL TL	.592	.029	20.704	.000	.535	.646	.350	.034	10.374	.000
PS TL	.294	.038	7.723	.000	.212	.365	.211	.027	7.935	.000
PS PL	.219	.038	5.699	.000	.140	.296				

Note: PL = person-leader fit, TL = trust in leader, PS = psychological safety

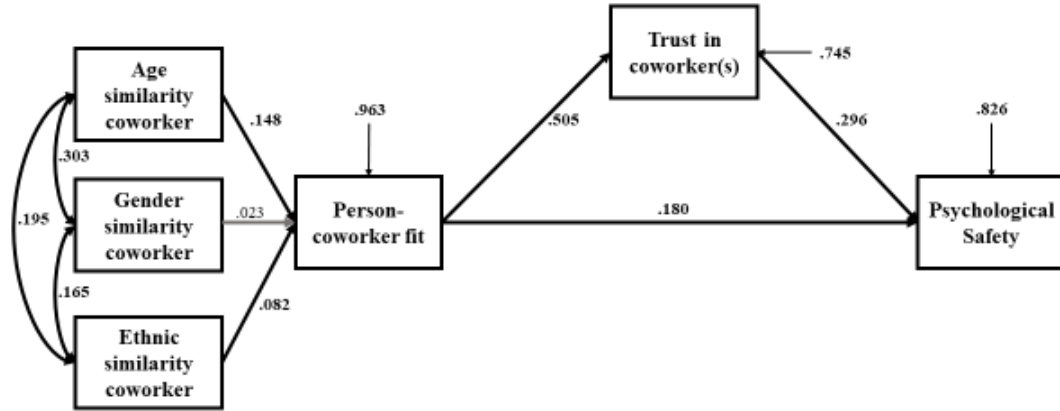


Figure 4. Path model for Coworker variables.

Note: All coefficients reported in the model are standardized; lighter paths are non-significant.

Table 15

Standardized Coefficients and Coworker Model Summary

	Predictor	β	SE	t	p	95% CI		R^2	SE	t	p
						Lower	Upper				
PC	Age	.148	.037	3.983	.000	.079	.219	.037	.013	2.758	.006
	Gender	.023	.039	.606	.545	-.052	.099				
	Ethnicity	.082	.037	2.225	.026	.005	.149				
PC	TC	.505	.032	15.997	.000	.442	.564	.255	.032	8.011	.000
PS	TC	.296	.034	8.812	.000	.226	.358	.174	.024	7.141	.000
	PC	.180	.036	5.021	.000	.107	.249				

Note: PC = person-coworker fit, TC = trust in coworkers, PS = psychological safety

To test whether trust mediates the association between fit and psychological safety (hypothesis 3), indirect effects using ML estimation were tested and evaluated in Mplus v.8.2 (Muthén & Muthén, 2008) and the standard errors for the indirect effects were estimated with a bootstrapping procedure using 1000 bias-corrected bootstrapped samples (Hayes, 2013; Little, Card, Bovaird, Preacher, & Crandall, 2007; Hayes & Preacher, 2014). Table 16 provides a summary of the direct, indirect effect, and total effects for each model. Results indicated that trust significantly mediated the relationship between fit and psychological safety for each of the three referents providing full support for hypothesis 3.

Table 16

Summary statistics for direct and indirect effects (through trust) from person-environment fit to psychological safety

Direct and indirect effects from person-organization fit to psychological safety					
	Standard coefficient	SE	<i>t</i>	<i>p</i>	Bootstrapped 95% confidence interval (CI)
Direct effect	.205	.040	5.074	.000	.125, .283
Indirect effect	.206	.023	8.802	.000	.159, .254
Total effect	.411	.033	12.417	.000	.342, .474
Direct and indirect effects from person-leader fit to psychological safety					
	Standard coefficient	SE	<i>t</i>	<i>p</i>	Bootstrapped 95% CI
Direct effect	.219	.038	5.699	.000	.140, .296
Indirect effect	.174	.024	7.210	.000	.124, .220
Total effect	.393	.032	12.433	.000	.327, .452
Direct and indirect effects from person-coworker fit to psychological safety					
	Standard coefficient	SE	<i>t</i>	<i>p</i>	Bootstrapped 95% CI
Direct effect	.180	.036	5.021	.000	.107, .249
Indirect effect	.149	.019	7.979	.000	.113, .187
Total effect	.329	.033	9.931	.000	.264, .392

CHAPTER 5: Discussion**Discussion**

The present study sought to explore the mechanisms through which an employee perceives psychological safety in the workplace with an emphasis on the impact of employees' perceptions of how they similar they are to others in the organization with respect to age, gender, and ethnicity, how they perceive their fit within their employment context and whether or not they have trust in their working relationships. This research aimed to address several gaps in the literature with respect to a dearth of empirical studies positioning psychological safety as an outcome of interest, and bridges the literatures concerning workplace fit, relational demography and psychological safety.

To these aims, this study also addressed calls to action for exploring multiple types of fit in order to provide a more holistic examination of how individuals perceive themselves within the organizational context and how their perceived fit impacts individual outcomes such as trust, and psychological safety. Bridging these literatures and addressing calls to action resulted in a hypothesized conceptual model of antecedents of psychological safety providing a novel contribution to the literature.

According to Kenny (2015) a good-fitting model is one that is “reasonably consistent” with the data and does not necessarily require re-specification or modification; that is, the model is generalizable and results can be reproduced or replicated using another sample. The proposed model exhibited excellent model fit as was indicated by examining multiple goodness of fit statistics and model strongly suggests pathways to perceptions of psychological safety. The data also supported significant indirect effects of perceived fit (organization, leader and coworker) to perceptions of psychological safety through its corresponding trust referents. It may be inferred

from this finding that trust plays an integral role in the relationship processes necessary for employees to perceive they are safe to express themselves in the organizational context. This finding contributes to an understanding of the mechanisms that may lead to the development of perceptions of psychological safety in the workplace and has the potential to fuel future research focused on the development of organizational processes to facilitate psychological safety across other levels of analysis.

Relational demography.

Perceived similarity to organization, leader and coworker age predicted organization, leader and coworker fit respectively. This finding suggests that employees feel more congruence with organizational referents if they also consider themselves to be similar in age. Given that relational demography is theoretically supported by self-categorization and self-identify theories, this finding could be explained by a focus on (or attention to) surface-level characteristics and the perception of interpersonal compatibility based on perceived similarity with visible characteristics.

Participants were asked to rank their perceived similarity with organizational referents. Although there is no way of knowing how close participants were to accurately gauging this similarity it is plausible to consider that age may provide certain visual cues that support a level of comfort and perceived compatibility with organizational referents. This perceived compatibility may serve to enhance perceptions of fit, perhaps in concert with assumptions of value congruence or similarity in other aspects of life or work. It is plausible that the salience of age similarity in the workplace connotes similar levels of experience, expertise, skills or ability in the workplace context, similar life experiences, or similar social standings.

Gender similarity was not found to be significant for any of the referents of interest. This is an interesting finding, though one that should not be particularly surprising due to the balance of gender in the workplace; as well as an increased emphasis on gender equality at a societal level and the shift in acceptance toward members of the workforce who fall outside the gender binary. While the majority of the participants in the present study identified as either male or female, the Likert scale response format of ranking perceived gender similarity on a scale of one to five allowed for some fluidity in gender conceptions. This was not however specified in the instructions for this question and as such participants may have not considered this possibility explicitly. Nonetheless, for each of the referents participants had the option of rating degree of similarity on a scale from one to five and there was variation across the scale providing some indication that there may have been some fluidity with respect to perceived similarity. Even when participants were asked to consider their gender similarity to a single referent (“your leader”), scores fell along the continuum of very dissimilar to very similar.

In spite of global trends toward greater gender diversity in the workforce, the fact that gender was not related to fit may be somewhat surprising given the current climate in the United States. It has been argued that the United States has taken steps backwards in the past year with respect to gender equality and tolerance of (and “equal” rights for) individuals who do not conform to traditional, conservative gender categories (e.g., Graves, 2018; Mason Pieklo, 2019; Steinmetz, 2019). Under these conditions one may have expected to see greater delineation between two extremes of the scoring range (very similar or not similar at all) and a stronger relationship between gender and perceived fit especially considering the fact that more than half of respondents identified as male and patriarchal rhetoric has proliferated in the current conservative climate in the United States. Although gender explorations were beyond the scope

of this inquiry, future research may wish to explore the relationships between gender expression/identity and fit in the workplace (for example see Calzo, Poteat, Yoshikawa, Russle, & Bogart, 2018 for research on person-environment fit in the academic setting and gender diverse youth, or Koseoglu, Blum & Shalley. 2018 for an examination of gender similarity and job satisfaction and perceived coworker support).

The most interesting finding with respect to relational demography and fit was the fact that perceived ethnic similarity with coworkers significantly predicted fit suggesting that ethnicity is an important factor in perceptions of fit with peers for this sample. This is interesting given the increasingly diverse nature of most contemporary organizations; however, it is important to recall that 68% of participants in this sample identified as Caucasian and as such there is a very definite “white” bias to this sample. This number is consistent with United States Census Bureau (2018) reports that 60.7% to 76.6% of Americans identify as White alone (no Hispanic or Latino) or White alone, respectively.

Research examining homogenous groups in the workplace reveals that group members rating their groups as more similar have higher ratings of group satisfaction and report liking group members more, have higher job performance, and typically exhibit less turnover (e.g., Joshi & Roh, 2009; O'Reilly et al., 1989; Schneider et al., 1998; Wagner et al., 1984; Watson et al., 1993; Williams & O'Reilly, 1998). This research provides support to the connection between perceived ethnic similarity and fit, assuming that participants perceived their organizational contexts as more ethnically homogenous. Given the contentious political environment in the United States at the time of writing, this finding could be pause for concern. In the past year overt and explicit nationalist and white supremacist views have increasingly dominated U.S media and social rhetoric (e.g., Feinber, Branton, & Martinez-Ebers, 2019; Serwer, 2019).

Furthermore, academic research has provided evidence for the relationship between multiculturalism and race essentialism (Wilton, Apfelbaum, & Good, 2018), and between diversity preferences (or in-group bias, out-group ranking) and increasing campus and workplace segregation (Bursella, M. & Jansson, 2018; Thelamuur, Mwangi, & Ezeofor, 2019). In the current anti-immigration climate in the US, ethnic employees may be less likely to voice concerns or challenge the status quo and therefore be less likely to perceive psychological safety in the workplace. The heavy predominance of Caucasian voices in this research provides a potential confound due to the fact that ethnic voices were attenuated in this sample. Future research should explore the relationship between perceived ethnic similarity and person-environment fit in samples characterized by a greater range of diversity. Future research should also be designed to explore the interrelations of ethnic similarity and person-environment fit in relation to inclusion, diversity, and ingroup bias.

Person-environment fit.

Consistent with expectations, perceived person-environment fit (with organization, leader, and coworker referents) directly predicted employee perceptions of psychological safety. In the context of this research, fit was conceptualized as congruence between personal values and beliefs, and those of organizational referents. Value congruence may heighten comfort and perceived familiarity with organizational referents and therefore strengthen relational bonds that may serve to promote feelings of fit. However, there are other conceptualizations and measures of fit which are based on more tangible elements of role, skill, and competency congruence, or personality, interests, or need congruence and measurement of fit using these assessment tools may have yielded different results. Future research may wish to determine the predictive ability

of multiple types of fit and determine whether there are additive or interaction effects of different types of fit in organizational contexts. For example, it is plausible to consider that poor role, skill or competency congruence may diminish the effects of positive value congruence and that perceptions of psychological safety may be impacted as a result.

Trust and psychological safety.

The results of the present study provide important theoretical contributions with respect to trust and perceptions of psychological safety. First, data analysis revealed that trust variables were moderately correlated with psychological safety (see Table 11) supporting the distinction between the two constructs in this research. Secondly, trust was found to be an integral element in the relationship between perceived fit and perceptions of psychological safety. Significant indirect effects of the perceived fit – perceived psychological safety relationship through trust indicate that trust plays an important role in the development of perceptions of psychological safety. Fit predicts trust which is indicative of relationship building processes and social identification with those members of the organizations within which one works. The more individuals perceive they fit with organizational referents, and the stronger their assessments of trust in organizational referents, the more likely they are to report perceptions of psychological safety.

The theoretical paradigms underpinning trust and trust research support these findings. Social exchange theories assume that trust is founded on the benefits of positive relationship exchanges; in the absence of trust, social exchange relationships cannot be developed (Blau, 1964). Similarly, Luhmann's systems theory (1979) postulates that engaging in trusting behaviours facilitates the cognitive basis of trust as extending trust engenders reciprocity. When an individual actively decides to trust and engages in trusting behaviours with another individual

or group, trust behaviours are reciprocated within the system or exchange relationship.

Cognitively, as one perceives more trust in a given referent, there is a greater likelihood the referent will be perceived as possessing the characteristics that mitigate the consequences of interpersonal risk taking and vulnerability, thus rendering perceptions that the relationship or context is psychologically safe.

Social identity (Tajfel & Turner, 1979), social categorization (Turner et al., 1987), attribution (Heider, 1958; Weiner, 2010), and social information processing (Salancik & Pfeffer, 1978) theories also provide credence to the findings of the current study if trust is conceived as an integral part of the sense-making process in organizations. Trusting relationships are constructed through assessments of the individuals/entities in the relationship, the relative level of risk and vulnerability, confidence and familiarity based on expectations and previous experiences and the contextual constraints that bind the relationship (Luhmann, 1979, 1988; Rousseau et al., 1998).

Because trust in this research was conceptualized as a global judgement and perceived as a cognitive assessment or belief, one cannot determine the components of trust which are directly attributed to facilitating the relationship between fit and psychological safety. Research has shown that trust changes over time. Swift or early trust is based largely on heuristics and cognitive trust mechanisms in order to reduce uncertainty in novel situations (Jones & Shah, 2016; McAllister, 1995; Meyerson, Weick, & Kramer, 1996). Affective components of trust are involved as trust develops over time. Although tenure did not significantly impact the results of this study, research supports the fact that trust changes over time as a function of the relative importance of cognitive and affective components (Jones & Shah, 2016). This certainly would be a fruitful avenue for future exploration as the conceptualization of trust used in the context of this

research was limited. Designing longitudinal research studies using more nuanced conceptualizations of trust, addressing a variety of trust and trustworthiness components may provide a more comprehensive picture of how trust impacts the relationships explored in this study.

The study findings support the argument that trust is an integral factor in facilitating the relationship between perceived fit with organizational referents and perceptions of psychological safety. What is missing from this understanding are the mechanisms through which trust impacts these relationships. Is it that individuals have a general propensity to trust and this underlies the process of developing perceptions of psychological safety? Are there specific components of trust or specific trustworthiness characteristics which are more or less important in this process? The theoretical implications here are that we now know that trust is integral, but we do not know why or how. Both constructs are related to each other, though aside from conceptual distinctions and related definitions, the literature does not adequately disentangle how just yet. Nonetheless, there must be something unique in the way psychological safety is developed that sets it apart from trust.

Furthermore, despite suggesting that trust and distrust are determined by different antecedents, there is a dearth of organizational research identifying what predicts distrust with the majority of distrust research linked to the fields of marketing, consumer behaviour, and information technology. This makes it difficult to discern whether and to what extent distrust might impact this model. Based on the definition of distrust discussed earlier, it is plausible to assume that negative perceptions of psychological safety would result in skepticism regarding the intentions of organizational referents and thus foster perceptions of distrust at a given point in time. This however, is beyond the scope of this study and future research would benefit by

explorations which would lead to a clear understanding of the mechanisms through which distrust is created and discover how distrust and trust may work concurrently to impact various organizational outcomes.

Limitations and Additional Avenues for Future Research

Cross-sectional research design.

The limitations of this study provide additional research opportunities. First, the cross-sectional nature of the research precludes inferences of causality. Although strong theoretical arguments have been made concerning the direction of associations and all significant effects were in the hypothesized directions, the direction of causality cannot be unequivocally discerned. For example, it may be that employees feel psychologically safe in their work environments which leads them to believe that they have greater trust in organizational referents and as a result of this trust perceive a greater level of fit with the organization and its members. Although this is a possibility, the direction of causality indicated in the hypothesized relationships seems more plausible given that value congruence with organizational referents would enhance perceptions of similarity and comfort and thus lead employees to view organizational referents as having characteristics worthy of trust. Likewise, in these relationships, having trust in organizational relationships may create a closeness and comfort within the context that facilitates personal expression and norms of acceptance and acceptance of interpersonal risk-taking.

Furthermore, while strong theoretical arguments have been advanced regarding the direction of causality, one cannot ignore the reciprocity inherent in the relationship between trust and psychological safety. In fact, in the workplace context trust and psychological safety may in fact be two parts of a recursive/reciprocal relationship process. On the one hand, employees

assess characteristics and actions of organizational referents to determine the level of risk and uncertainty associated with interpersonal interactions. Employees decide to trust based on these assessments. In the process, organizational referents may come to react to interpersonal risk taking in increasingly positive (negative) ways thus facilitating (inhibiting) strong norms related to personal freedom of expression and voice in the work context. In this way the process of trust building and the development of psychologically safe contexts may be dependent on bidirectional relations between individuals and organizations (see Lumineau and Schilke, 2018), yet may follow distinct development processes. Trust may begin as a cognitive assessment based on contextual factors and need, but may change over time as affective trust builds based on emotional judgment related to liking, perceived similarity, and interpersonal connectedness. Future research using longitudinal designs would be better positioned to resolve issues confirming causality.

The study design gathered data from participants asking them to make judgements regarding perceived levels of demographic similarity, person-environment fit, trust, and psychological safety at a given moment in time. This method does not allow for an examination of how time impacts perceptions of similarity or changes perceptions of fit. Likewise, this “snapshot” approach does not account for the developmental processes associated with trust and trust building in organizational contexts. This limits the generalizability of the research. Future studies are encouraged to follow Edmondson and Mogelof’s (2005) lead by designing longitudinal studies to provide a more comprehensive examination of the constellation of organizational mechanisms that contribute to the development of psychological safety in the workplace. Furthermore, while tenure contributed very little to the model in this sample, it is plausible that longitudinal studies from within organizations would provide a more complete

understanding of the effects of time and tenure on fit, trust, and psychological safety at work and facilitate a better understanding of the processes of trust and psychological safety development.

Use of crowd-sourcing platform.

Secondly, there is a significant debate with respect to the use of crowd-sourcing platforms, such as AMT, for the collection of research data. One side of the debate cautions the use of crowd-sourcing platforms due to problem respondents who provide poor quality data and are driven by monetary incentives to complete many HITS in the least amount of time possible (Ford, 2017; McGonagle, 2015; Smith, Roster, Golden, & Albaum, 2016). Other concerns include the possibility for participants to take a single survey multiple times and the fact that unsupervised subjects tend to be less attentive and thoughtful in their responses than participants in a more controlled experimental environment (Paolacci, Chandler, & Ipeirotis, 2010). On the other hand, there is considerable research supporting the use of crowdsourcing platforms for their ability to provide fast, reliable, inexpensive access to large numbers of potential research participants (Buhrmester, Kwang, & Gosling, 2011). Self-report measures suggest that AMT workers are motivated by both intrinsic and extrinsic factors suggesting that the rewards associated with AMT work are not limited to monetary gain (Paolacci & Chandler, 2014).

With respect to data quality, research has shown that data collected from AMT participants met or exceeded conventional psychometric standards set by data collected using traditional university participant pool platforms (Buhrmester et al., 2011; Kees, Berry, Burton, & Sheehan, 2017) – another common data collection method that has its own camp of dissent (e.g., Ford, 20016). Research has also found data quality from AMT respondents superior to data collected from professional panels (Kees et al., 2017). AMT participants provide samples that are

more demographically diverse than typical undergraduate research pool participants (Buhrmester et al., 2011; Casler, Bickell, & Hackett, 2013).

Data quality in this project can be supported by examining the means and standard deviations of established measures used in published research. The literature indicates that for person-organization fit and psychological safety, the means and standard deviations reported in this research were consistent with findings in previously reported studies using samples collected from a variety of sources including data collected from within defined organizational contexts (e.g., Boon & Biron, 20016; Cable & DeRue, 2002; Carmeli et al., 2009; Edmondson, 1999; Erkutlu & Chafra, 2016; Kim, Cable, & Kim, 2005; Kim, Lin, & Kim, 2017; Kirkman et al., 2013).

Certainly, AMT samples are not fully representative of the demographic characteristics of the general population of the United States, rendering generalizability a moderate issue. However, the nature of the study and the survey questions called for an older, employed sample that was achieved using AMT with 80.5% of participants reporting full-time employment status and 75.5% of respondents between the ages of 26 and 55. Given that participants could be from anywhere in the United States (participants reported residing from coast to coast) it is highly unlikely that participants worked in the same organizations. Participants would not be exposed to the same contextual parameters; as such, the findings are not dependent upon a single organizational culture. Because of this, there is increased confidence that these findings are not unique to a single organizational context and may be more generalizable to a broader understanding of the possible mechanisms through which perceptions of psychological safety may occur in individuals.

However, future research would benefit from testing this model within the context of an organization (or within multiple organizations) to determine the generalizability of these findings to an employed sample where participants are employed together or with the same organization(s). This would facilitate a more nuanced exploration of trends in perceptions of psychological safety across different organizational layers and at a practical level would allow for more targeted intervention if areas of extremely low psychological safety were apparent. Testing this model within the boundaries of an individual organization would allow for an examination of organizational policies to identify internal facilitators and barriers that may be enhancing or impeding trust processes and the development of psychological safety. Research employing longitudinal designs would facilitate a more comprehensive understanding of how perceptions of these constructs develop over time and under organizational constraints.

Focus on individual-level perceptions.

For the current study, the emphasis on individual level perceptions of the constructs provided a limited focus for a complex phenomenon. However, the focus on individual-level perceptions and a consistent individual-level perspective on the variables was necessary in order to centre the tested variables as foundational for future research examining the same variables at all other levels. The literature supports that understanding perception is integral to future understandings of group processes and dynamics. Given the homology identified in the extant research, and the findings here, examining multiple organizational layers, it is safe to conclude that psychological safety may be a multi-level construct and that it may be better described as a dynamic process that both influences, and is influenced by, a host of organizational and interpersonal factors. That said, understanding how it is perceived at the individual level is the

necessary starting point to discovering the mechanisms through which these processes are realized.

Without individuals perceiving that they fit within their organizational contexts and perceiving that they are psychologically safe in those contexts, there cannot be an aggregate perception of psychological safety in the workplace; perception originates at the individual level and should be understood from this basic level first before it is aggregated to higher order group processes or climates. Determining the mechanisms through which this individual perception can be developed has the potential to expand the nomological net of psychological safety and fuel future research with respect to creating environments and organizational cultures that facilitate more macro-level experiences of psychological safety. In an attempt to capture individual level perceptions of psychological safety, items were adapted to read in the first person with the referent being “of this/in this organization.” Although this adaptation is one commonly used in the literature, it is possible this framing may have affected the validity of the measure by confounding individual and organizational experiences resulting in the measurement of unintended effects as participants may not have disentangled different levels of analysis.

Future research should continue to explore antecedents of psychological safety at the individual-level of analysis. Understanding how this construct is developed at the individual level will facilitate more nuanced approaches to developing and implementing initiatives to help foster psychologically safe environments. A more nuanced measure, framed at the individual level, to better capture individual level perceptions and experiences of being psychologically safe in the workplace is needed.

Single-item measures.

In line with previous research, the present study measured several independent variables using single-item scales. Relational demography was measured using a single item ranking degree of similarity to organizational referents on three demographic variables. Similarly, participants were asked to rate the degree to which they had trust in organizational referents using single item scales. However, measurement using single items may limit the degree of generalizability of some findings or limit the scope of measurement of constructs. Arguments have been made that reducing a complex construct such as trust to a single, general item risks collecting responses that reflect participant's general feelings about a given referent rather than careful consideration of the factors or dimensions that underlie the construct (Seyd, 2016). Moreover, because single item measures do not allow researchers to know what the frame of reference was for participants responses to the item, and to the extent that similar frames of reference are important or useful, future work can use more nuanced measurement tools to capture this and facilitate a better understanding of the relationships and what they were based on.

On the other hand, research has found that single item measures are considered reliable and valid tools in social science contexts and are advantageous considering the practical ease with respect to mitigating response fatigue and decreasing the number of items in large surveys measuring multiple variables, (e.g., Atroszko, Sawicki, Makinia, & Atroszko, 2017; Carifio & Perla, 2007; Cheung & Lucas, 2014; Fisher, Matthews, & Gibbons, 2015; Fuchs & Diamantopoulos, 2009; Gardner, Cummings, Dunham, & Pierce, 1998). In fact, some research suggests that they can be more appropriate than multi-item measures (Gardner et al., 1998). Furthermore, Carifio and Perla (2007) suggest that single item measures are particularly useful in

complex models because the analysis of Likert response format data at the item level is statistically robust; however, when used it is recommended that a more conservative alpha level be relied upon as an indication of significance (e.g., $p < .001$; Atroszko et al., 2017).

Rossiter (2002) suggested that single item measures are sufficient if, in the minds of participants, the construct being measured and its attributes are easily and uniformly imagined. This is especially applicable for the construct of trust where individuals have concrete understandings of whether or not they trust specific referents and to what degree. The present research was not seeking to test dimensions of trust or trustworthiness; neither was it exploring the determinants of trust. Rather, the present study aimed to explore whether individuals' perceptions of trust influenced the relationships between perceived referent fit and perceptions of psychological safety.

One advantage of using a single item measure in this case is the neutral wording of the question which does not specify the grounds on which trust may be given or withheld, reducing the possibility of conflating the measurement "I do or do not trust" with the possible causes for trust. This study did not test components of trust, trust building processes, or trusting actions or intentions. Rather this study measured whether a participant perceived trust in an organizational referent and to what degree – perceptions that should have been easily and uniformly imagined. Likewise, with respect to perceived similarity on demographic variables, individuals would possess a concrete understanding of how similar they were to target referents.

Other intervening variables.

Kahn's (1990) early theorizing very broadly identified four antecedents to psychological safety: interpersonal relationships, group dynamics, leadership, and organizational norms; however, there is a dearth of research empirically examining these constructs as antecedents to

psychological safety individually, let alone collectively. Future research would benefit from a closer examination of these constructs as antecedents and empirical testing of these constructs would benefit the field's understanding of the mechanisms that may or may not contribute to the development of psychological safety. Because the literature also links these constructs with various components of trust, and the fact that the present research indicates the significance of trust in the examined relationships, it would be prudent to design more complex research programs aimed at untangling the multi-leveled and complex processes of trust development and the evolution of perceptions of psychological safety.

Leader distance poses a concern with regards to the parameters of the research and the ability for participants to conceptualize constructs consistently across the sample. In this research participants were asked to rate the degree to which they had or did not have trust in leaders. However, the dynamics of this trust could be impacted by the distance between the employee and the leader, and also between the leader and the upper echelons of the organization. Employees can be separated from their leaders physically, socially, or as a function of limited interaction and if the degree of distance between employees and leaders differs substantially across a sample then some participants are rating their trust in leaders who are significantly more proximal or perceived as significantly more representative of the organization (Legood, Thomas, & Sacramento, 2016).

Other research suggests that that employees may not clearly distinguish between leader and organization referents due to the fact that organizational leaders are perceived to be representatives of the organization as whole (Searle et al., 2011). Giddens (1990) argued that people play significant roles in the development of trust in institutions, particularly those individuals who occupy roles representing the interface at which trust is built (Searle et al.,

2011). Thus, although organizational trust is fundamentally about trust in an abstract system, perceptions of organizational trust may be confounded by trust in individuals representative of that system (and vice versa) – the more senior the position the more it may be perceived as representative of the institution.

In light of these points future research would be advised to explore the moderating potential of employment role in the organization, employment status, and/or leader distance, on the development of trust and psychological safety. Not only may leader and organizational referents be confounded, but employment role also has the potential to impact results based on the fact that psychological safety may increase as function of how high up the organizational ladder one is. Likewise, employment status also has the potential to impact perceptions of fit and psychological safety. Employment role, and employment status may both moderate the relationships between trust fit and psychological safety, as well as impact the mediation relationship through trust. It is likely that members higher in the organization would have (or should have) a greater sense of psychological safety associated with the resources they have access to and the power conferred upon them by their positions. Similarly it is plausible that employment status (part-time, full-time, contract, etc.) would moderate the relationships in a comparable manner as individuals with less secure (more precarious) employment would conceivably be less likely to voice or challenge ideas to avoid being perceived as making waves or rocking the boat.

Practical Implications

At a practical level, insights from this research identify trust as a significant influence in fit and psychological safety providing a key starting point for the development of interventions aimed at improving both person-environment fit and psychological safety. Where the Canadian

National Standard has identified 13 factors that impact psychological health and safety in the workplace (including an environment characterized by trust), this research clearly positions trust in organizational referents as a primary means for enhancing perceptions of psychological safety in the workplace. Human resource professionals, consultants and management would be well advised to develop interventions that target trust building in order to increase the trust that employees place on interpersonal relationships at work. Proactive efforts to build and maintain trust constitute a valuable starting point for the strengthening perceptions of psychological safety at work.

As workplaces become increasingly diverse, the challenge becomes how to integrate diverse perspectives in a manner that is respectful, accepting, and open to risk-taking. Developing an enhanced understanding of the antecedents of psychological safety and exploring psychological safety for individual employees as an outcome in its own right has the potential to inform future research with respect to accessing the benefits of, and mitigating the detrimental effects of, an increasingly diverse workforce. In the present study ethnic voices may have been attenuated by the predominantly Caucasian sample and a more ethnically diverse sample may have produced alternative results. Group members may experience greater freedom to express opinions, voice new ideas, and develop trusting relationships when in groups predominated by similar others. This freedom may be attributed to perceptions of the relative safety in placing themselves in situations of interpersonal risk. However, group homogeneity may inhibit expression of individuals not obviously part of the dominant in-group. Minority members may not experience psychological safety to the same degree as majority members, but their perceptions and experiences may be lost unless organizations take the time to understand the needs of those individuals who score outside the average. Thus, an important consideration and

perhaps a cautionary note with respect to the application of these findings, is the need to pay attention to all voices and identify those who fall outside of the norm with an eye to increasing psychological safety and trust, especially in contexts that, while diverse, may still be subject to a dominant majority.

Organizational leadership would be well advised to take cultural awareness training in order to enhance their own cultural sensitivity, and as a means of understanding cultural differences that may impact perceptions of psychological safety in diverse groups. Leaders should be aware of, and sensitive to, the fact that there are instances when an individual approach to relationship building with subordinates will have the greatest success in developing strong interpersonal relationships in the workplace and the need to tailor communication and teaching styles in order to effectively engage with diverse employees (Chen, Liao, & Wen, 2014). Modelling behaviours that show an appreciation for, and understanding of, diverse perspectives and the value of diverse ideas has the potential to create organizational cultures and climates that value uniqueness and thus provide psychological safety to diverse employees. Likewise this training should be filtered downward throughout the organization in order to increase employee cultural intelligence across all organizational levels.

Cultural intelligence is an individual's ability to function effectively in contexts characterized by cultural diversity (Rockstuhl & Ng, 2015) and has been suggested as an important means of facilitating trust in diverse teams. At a practical level, using advanced selection tools to measure candidate cultural intelligence and increasing the cultural intelligence of current employees through training and personal development programs, could help foster trust in the organization and organizational referents. Leaders may also work to create supportive diversity climates by increasing minority representation across all organizational levels,

supporting internal and external (community) diversity related initiatives, and by hiring from diverse sources (Singh et al., 2013). Efforts such as these would help facilitate relationship building with leaders and colleagues. Increasing awareness, acceptance, and valuing of diversity could foster norms that encourage all individuals to voice ideas and express themselves more freely in the workplace.

Businesses increasingly acknowledge the practice of hiring for “fit” in order to employ individuals who hold similar values to the organization and to the teams within which they will work. Finding the right fit is done as a means of reducing attrition by selecting individuals who are compatible with leaders and colleagues and who will be able to internalize company and team values and goals. Schneider and colleagues (1995) argued that it was through this selection for fit process that individuals would experience more positive employment outcomes. However as the current study revealed (with respect to perceptions of psychological safety), fit is not the only necessary consideration and, in fact, success and positive outcomes in the workplace may be both a direct and an indirect result of trust. Trust was a strong predictor of psychological safety and an important implication of this finding is that hiring for fit must be supported with policies and practices that facilitate trust building.

In support of this, research has consistently found that perceptions of fit can be enhanced in new employees through socialization processes (Cable & Parsons, 2001; Chatman et al., 2008; Cooper-Thomas, van Vianen, & Anderson, 2004; De Cooman et al., 2009; Hsieh, Weng, & Lin, 2018; Schein, 1968; Van Maanen & Schein, 1979). Research also suggests that organizational identity formation is enhanced by socialization processes as new employees begin to display attitudes, values and behaviours that are increasingly consistent with those of the organization (Bauer, Morrison, & Callister, 1998). In fact, the more consistently organizations socialize and

influence employees, the more aligned their values become with those of the organization – thus, the greater their perceived fit (Chatman, 1991; Hsieh et al., 2018).

Researchers also argue that socialization mechanisms have the potential to increase member trust (Hsieh et al., 2018; Puusa & Tolvanen, 2006; van der Werff & Buckley, 2017). As new employees are socialized and begin to formulate and internalize an organizational identity, trust is required to navigate new relationships and contexts (Kramer, 2001). Newcomer socialization has been highlighted as an important stage during which newcomers develop perceptions regarding what they can expect of organizational referents within a new employment context (de Vos, Buyens, & Schalk, 2003). In this respect, at a practical level, organizations can increase perceived fit, member trust and perceptions of psychological safety by implementing policies and practices that provide socialization processes which include trust building. Added benefits of this approach would be increasing the development and internalization of an organizational identity and increased positive employee outcomes.

Finally, as mentioned earlier, there has been an increased emphasis on the need to protect employees' psychological well-being and create workplaces that are psychologically safe which has stemmed from an increased recognition of the negative outcomes that are associated with psychosocial risk. Many countries are developing national systems to monitor and evaluate psychosocial risk factors in the workplace as a means to inform policy and programs designed to mitigate work-related stress and promote psychological health and well-being at work. The findings from this research can be used to strengthen these systems and empirically inform national systems and policy, including The Canadian National Standard and the HSE Management Standards.

Employees are increasingly being urged to contribute to organizational success by demonstrating behaviours which foster creativity and innovation (Newman et al., 2017). Employees are also encouraged to engage in behaviours such as voicing new ideas, collaborating with other organizational members, and experimenting with new ways of organizing, operating, and completing tasks. Understanding that trust plays such an integral role in the development of contexts that embrace these behaviours has the potential to fuel a shift in the way that organizations prioritize psychological safety as a result of a more comprehensive picture how to facilitate its development. Determining the conditions under which employees *feel* psychologically safe is a necessary and critical first step in creating a context that *is* psychologically safe. Prioritizing trust building and the development of organizational cultures that value strong, interpersonal relationships that are founded on trust may just be a step in the right direction.

Practical challenges related to psychological safety

Newman and colleagues (2017) suggest there has been a disproportionate focus on the positive outcomes of psychological safety and other researchers have noted the potential negative effects of a lack of censorship as a result of extremely high perceptions of psychological safety (e.g., Edmondson & Kramer, 2004; Edmondson & Lei, 2014). Might there be such a thing as too much psychological safety? Pierce and Aguinis (2013) have proposed a referred to as the too-much-of-a-good-thing effect (TMGT effect). According to their work, the TMGT effect occurs when levels of typically beneficial antecedents reach tipping points, at which point the relationships shift from linear and positive to an inverted U-shape and negative. It is highly plausible to conceive of instances where high psychological safety may in fact become

detrimental to organizational functioning. For example, findings from the research of Pearsall and Ellis (2011) indicate that teams high in utilitarianism may use psychological safety of their environment to choose the most beneficial option to a problem regardless of the ethicality of that solution. In practical terms, individuals high on psychological safety may feel so comfortable challenging the status quo and voicing opinions that they may assume control of team projects, meetings, social environments at the expense of the contributions of others. Low barriers to challenging ideas and voicing concerns could potentially lead to counterproductive behaviour with regard to the amount of time wasted discussing trivial or non-task related issues. In order to mitigate this, clear focus around common values and goals related to tasks should be established. Edmondson and Kramer (2004) suggest that interpersonal competence and communication needs to be enhanced in groups as a means of countering the possible negative effects of too much psychological safety and increase organizational learning.

Likewise teams with strong norms of interpersonal risk-taking may experience conflict with other organizational teams with which they have not spent time cultivating the same norms. Teams low on psychological safety may experience conflict with open and challenging teams resulting in poor intraorganizational relationships that may be counterproductive to overall organizational productivity. Leaders and managers would be well advised to work at achieving a balance of encouraging open communication and providing parameters with respect to the focus of communication and sharing of ideas, such that the goals and values central to the project or tasks remain at the fore. Edmonson and Lei (2014) recommend that psychological safety in organizations needs to be accompanied by important organizational factors such as defined strategy, clear vision and goals, and supportive leadership.

Since leaders play such a critical role as both the face of the organization and often the direct model for organizational behaviour and identification, leader behaviour is an important consideration in the development of trust and perceptions of psychological safety in the workplace. Aranzamendez and colleagues (2015) findings suggest that there are specific leadership behaviours needed to offset perceived interpersonal risk at work: leadership inclusiveness, trustworthiness, change-oriented leadership, and ethical leadership. Hirak and colleagues (2012) agree, and their findings suggest that leader inclusiveness promotes higher trust and psychological safety in work teams by modelling behaviours of openness, availability, and accessibility. Ultimately this results in the creation of climates that invite input from employees and leaders who are openly appreciative of members' contributions. Research suggests that servant leadership and ethical leadership styles are positively associated with fostering trusting relationships and enhancing perceptions of psychological safety (Chughtai, 2016; Walumbwa & Schaubroeck, 2009). In light of this, organizations would be well served to develop assessments to screen for ethical or servant leadership traits. Research suggests that high agreeableness and high ethical and moral standards are related to servant leadership and could be assessed using appropriate personality and integrity measures (Chughtai, 2016). Leadership training that included skills related to empowering employees, fulfilling employee growth needs, and interpersonal relation skills related to treating others with respect and dignity would be beneficial ways to increase trust and psychological safety via the development of higher quality interpersonal relationships.

Recent research also links emotional intelligence with trust in relationships (Rezvani & Khosravi, 2019). Findings indicate that emotional intelligence may be an important mechanism to mitigate stress in highly demanding organizational contexts and foster trust between team

members. Emotional intelligence refers to the ability to monitor one's own and others' emotions, distinguish between them and then filter and process this information to guide subsequent thinking and action. Providing organizational members with training aimed at increasing their emotional intelligence independently or alongside the cultural intelligence training suggested above, would certainly have the potential to facilitate higher quality interpersonal relationships founded on trust and ultimately the creation of stronger perceptions of psychological safety.

Finally, at the employee level, building high quality interpersonal relationships with colleagues is critical to having trust in organizational referents and perceiving organizational contexts as psychologically safe. Baker and Dutton (2007) identify five practices that could prove invaluable for leaders, organizations, and human resource professionals to consider in order to foster the building of high-quality relationships: selecting employees on the basis of relational skills, participatory selection processes, relational socialization practices, rewarding for relationship skills and using relational meeting practices. Selection practices that appropriately prioritize team-building competences, communication skills, conflict management competences, emotional competences, and collaborative skills strengthens the probability that high quality relationships will be developed and that trust and psychological safety will be facilitated. If candidates are routinely selected based on relational skills, it is plausible to consider that climates of trust and psychological safety would be more likely to develop.

Conclusion

Because perception begins with the individual there are important theoretical and practical implications associated with identifying individual-level determinants of psychological safety. From a theoretical perspective, considerable research links psychological safety to important organizational outcomes. However, significantly less research has been advanced to

expand the field's understanding of the determinants of psychological safety, thus contributing to a more refined understanding of the ways that psychological safety may be enhanced or inhibited at the individual level. From practical perspective, identifying facilitators of psychological safety enables a more tailored approach to the development and implementation of organizational programs, policies and/or interventions designed to increase employee psychological safety and thus employee and organizational performance.

Future research should continue to work toward developing a stronger understanding of the breadth of psychological safety at the individual level of assessment and work toward more clearly defining the mechanisms through which psychological safety is created. This project was a step toward identifying determinants of psychological safety and has found that person-environment fit and trust are important contributors to the development of individual perceptions of psychological safety and are two new avenues for future exploration. Understanding the mechanisms through which these perceptions are developed will strengthen interventions aimed at creating environments that are perceived as psychologically safe and will facilitate a more targeted approach to helping individuals develop a greater sense of psychological safety in their organizational contexts.

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Appendix A: Survey Description for Amazon Mechanical Turk

Description Headline: Research survey: Person Environment Fit, Trust and Psychological Safety Study

Requester: Twiladawn Stonefish, M.A. and Catherine Kwantes, Ph.D., University of Windsor

Contact: rutherft@uwindsor.ca

DESCRIPTION:

About this HIT:

- This is an academic study of climate change related values, beliefs, norms, and actions
- If you choose to accept this HIT and participate in this survey, you will be asked to complete an online questionnaire
- It takes approximately 5-7 minutes to complete

Participating in this HIT:

To participate in this HIT you must meet ALL of the following requirements:

1. You are 18 years or older
2. You currently reside in the United States
3. You are fluent in English
4. Amazon Mechanical Turk Qualifications: 90% approval rate

If you do not meet these eligibility requirements, your HIT will be rejected (that is, you will not be compensated).

You will receive \$0.50 as a token of appreciation for your participation. However, you must complete all of the survey questions to be eligible for compensation.

This HIT may be reposted periodically, but you may only participate once in this study. You will not be compensated for completing the study a second time.

Instructions

1. Please open the following link in a new tab or page: [PE Fit, Trust and Psych Safety Study](#)
2. Complete the survey
3. At the end of the survey, you will find a survey code. Please paste this code into the box below to receive your compensation.

Note: If you choose to withdraw from this study or otherwise not complete this study, please be sure to return to AMT and withdraw from this study HIT.

Appendix B: Letter of Information

LETTER OF INFORMATION FOR CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: One size fits all? Exploring the relationship of person-environment fit and trust to feeling psychologically safe in the workplace.

You are asked to participate in a research study conducted by Twiladawn Stonefish, under the supervision of Dr. Catherine Kwantes, from the Psychology Department at the University of Windsor. The results of this study will contribute to a dissertation which will be submitted Summer 2019 in fulfilment of the University of Windsor Ph.D., Applied Social Psychology, requirements. If you have any questions or concerns about the research, please feel to contact Twiladawn Stonefish (rutherford@uwindsor.ca) or her supervisor Dr. Catherine Kwantes (Catherine.Kwantes@uwindsor.ca).

PURPOSE OF THE STUDY

The purpose of this study is to investigate the trust and organizational fit and employee psychological safety in the workplace.

You are invited to participate in this study if you meet all of the following requirements:

1. You are an adult (18 years or older)
2. You currently reside in the United States
3. You are fluent in English
4. Amazon Mechanical Turk Qualification: 90% HIT approval rate

PROCEDURES

If you volunteer to participate in this study, you will be asked to:

- Complete a short online questionnaire which should only take approximately 5 minutes of your time. You may complete the questionnaire in a location that is most comfortable and convenient for you.

To participate, please do the following:

1. Select the “YES” option at the bottom of this page. By selecting the “YES” option, you agree to participate in this study.
2. Please follow the instructions for completing the survey questions, which will be found at the beginning of each survey section.

Upon completion of the questionnaire, please make sure to submit your responses by clicking on the “Submit” button at the end of the survey.

POTENTIAL RISKS AND DISCOMFORTS

Potential discomfort associated with this study is minimal. The study takes approximately 5 minutes to complete and therefore should not be an undue constraint on your time or cause any financial risks to you. The information being sought in this study is non-threatening, and would not, in a typical instance, be emotionally provoking or upsetting. However, it is possible that the questions asked may invoke mild unpleasant emotions associated with your place of employment or the people you work with. The risk associated with this is expected to be no greater than the discomfort you may experience in average, everyday interactions or conversations about your place of work, or your coworkers.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

While there are no immediate personal benefits to your participation in this research, the data collected from this study will contribute to scientific research. Findings from this study may help provide a deeper understanding of the ways that psychological safety may be developed or enhanced for employees. This understanding may be used to inform organizational programs and best practices designed to create workplaces that foster and value the psychological safety of employees.

COMPENSATION FOR PARTICIPATION

If you choose to complete this study, you will be compensated \$0.50 for approximately 5 minutes of your time. Only completed surveys will be compensated. If you choose to withdraw from the study or otherwise not complete the study, please be sure to return to AMT and withdraw from this study HIT.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission.

To ensure confidentiality, you will not be asked to provide any identifiable information, such as your name or contact information. Your worker ID is not linked to your responses; there will be no way to trace your answers to your AMT profile or personal information. Results of this study will be published as group totals only, and all the information you provide will be held in strict confidence. Amazon Mechanical Turk will not have access to your survey data. All data will be stored on a secure server on a password-protected computer. Anonymous data will be kept indefinitely. If you email the researcher regarding this HIT you will no longer be anonymous. After your issue is resolved, all email correspondence and personal information will be deleted in order to protect your confidentiality. Please do not share any personal identifying information with the researcher except your AMT worker ID number.

PARTICIPATION AND WITHDRAWAL

Participation in this research study is completely voluntary. If you volunteer to be in this study you may withdraw at any time prior to submitting your responses by exiting the survey and closing your browser. Once you have reached the end of the survey you will be asked to click a button to submit your data. Once you have clicked the submit button you cannot withdraw your data from the study. Only completed surveys will be compensated.

If you choose to withdraw from the study or choose to otherwise not complete the study, please be sure to return to AMT and withdraw from this study HIT.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

The results of this study will be available on the University of Windsor CCOR website.

Web address: <https://www.ckwantes.com/research-results>

Date when results are available: after September 2019

If you wish to obtain a copy of the results you may contact the researcher (Twiladawn Stonefish, rutherford@uwindsor.ca) and request an electronic copy.

SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications and in presentations.

RIGHTS OF RESEARCH PARTICIPANTS

If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I understand that the information provided for the study *One size fits all? Exploring the relationship of person-environment fit and trust to feeling psychologically safe in the workplace* as described herein. By clicking on the “I consent to participate in this research” button below I am signifying my consent to participate in this study.

You are encouraged to print out a copy of this letter of information to keep for your records. If you do not print a copy now but later decide that you would like to have a copy, please send your request to rutherft@uwindsor.ca or Catherine.Kwantes@uwindsor.ca and an electronic copy will be sent to you.

☐ I consent to participate in this research study. Please direct me to the questionnaire.

☐ I do not consent to participate in the study.

Appendix C: Summary Letter

Thank you for taking the time to participate in my research!

Please use the following survey code for compensation Amazon Mechanical Turk:

The study was intended to explore the relationships between employee perceptions of fit, trust, and psychological safety in the workplace. Results from this research will help broaden the scope of psychological safety research by trying to understand the mechanisms through which psychological safety may be developed and enhanced in employees. Research of this nature may inform future efforts at developing organizational initiatives to help foster more psychologically healthy workplaces.

Should you have any comments about the research, or would like to find out more information regarding the research results, please contact the primary researcher, Twiladawn Stonefish, at rutherft@uwindsor.ca.

Appendix D: Measures

Demographic Inventory

1. What is your age?
 - a. 18-25
 - b. 26-40
 - c. 41-55
 - d. 56-65
 - e. 66+
2. What is your gender?
 - a. Non-binary
 - b. Female
 - c. Male
 - d. Prefer not to answer
3. What is your race/ethnicity? (check all that apply)
 - a. Asian
 - b. Black/African American
 - c. Caucasian
 - d. European
 - e. First Nations, Métis, Inuit
 - f. Middle Eastern
 - g. East Indian
 - h. West Indian
4. What is your employment role?

- a. Part-time
 - b. Full-time
 - c. Frontline/Office
 - d. Administrative Support
 - e. Manager/Supervisor
 - f. Director
 - g. Senior Management
 - h. Other (Please specify)
5. In what state do you work (e.g., Michigan; Texas)? Please specify:
6. How long have you been employed with your current employer?
- a. Less than 12 months
 - b. 1-5 years
 - c. 5-10 years
 - d. 10-15 years
 - e. 15-20 years
 - f. 20-25 years
 - g. 25-30 years
 - h. 30-35 years
 - i. 35+ years
7. How similar do you consider yourself to be to your organization in terms of the average:
- a. Age?
 - b. Gender?
 - c. Ethnicity?

8. How similar do you consider yourself to be to your leader in terms of:
 - a. Age?
 - b. Gender?
 - c. Ethnicity?
9. How similar do you consider yourself to be to your coworkers in terms of:
 - a. Age?
 - b. Gender?
 - c. Ethnicity?

Person-Organization fit (Cable & DeRue, 2002)

10. The things that I value in life are very similar to the things that my organization values.
11. My personal values match my organization's values and culture.
12. My organization's values and culture provide a good fit with the things that I value in life.

Person-Leader fit (adapted from Cable & DeRue, 2002)

13. The things that I value in life are very similar to the things that my leader values.
14. My personal values match my leader's values and ideals.
15. My leader's values provide a good fit with the things that I value in life.

Person-Coworker fit (adapted from Cable & DeRue, 2002)

16. The things that I value in life are very similar to the things that my coworkers value.
17. My personal values match my coworkers' values and ideals.
18. My coworkers' values provide a good fit with the things that I value in life.

Trust in Organization

19. I have trust in my organization.

Trust in Leader

20. I trust my leader.

Trust in Coworkers

21. I trust my coworkers.

Psychological Safety (Edmondson, 1999b)

22. If you make a mistake in this organization, it is often held against you. (R)

23. Members of this organization are able to bring up problems and tough issues.

24. People in this organization sometimes reject others for being different. (R)

25. It is safe to take a risk in this organization.

26. It is difficult to ask other members of this organization for help. (R)

27. No one in this organization would deliberately act in a way that undermines my efforts.

28. Working with members of this organization, my unique skills and talents are valued and utilized.

Vita Auctoris

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EDUCATION: Bachelor of Arts (Honours): Psychology with Thesis and
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